

ÖN SÖZ

Değişen eğitim - öğretim sisteminde geometri programı

Bilimsel bilginin gelişimi, doğası, günlük hayattaki yansımaları, sosyal ve ekonomik yönden katkıları gibi birçok alanı birleştirerek öğrencilerin donanımlı, bilinçli ve geometri dersini severek öğrenmelerini amaçlamıştır.

Eğitim sistemimizin hedefleri arasında eleştirel, analitik, yenilikçi düşünen, sorgulayan yorum yapan yani üst düzey bilişsel becerilere sahip bireyler yetiştirilmesi bulunmaktadır. Bu nedenle kitabımız hazırlanırken öğrenciyi birçok yönden desteklemek ve öğrenmeyi kolaylaştırmak için gerekli yöntemler dikkate alınmıştır.

Ünite içeriği, konuların zorluğu ve kolaylığı üniversite sınavında soru gelme olasılığı test sayıları belirlemede ölçümüz olmuştur.

Soru içeriği, MEB Talim ve Terbiye Kurulu Başkanlığı'nın belirlediği kazanımlar esas alınarak oluşturulmuştur.

Kitabımızın sizlere yeterli verimi sağlaması dileğiyle...

Ömer Faruk CANER

Kitapla ilgili öneri, istek ve düşüncelerinizi aşağıdaki mail adreslerine iletebilirsiniz.

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PREFACE

Geometry program in the changing education system

By combining many fields such as the development of scientific knowledge, nature,

reflections in daily life, social and economic contributions, it aims to enable students to learn equipped, conscious by loving geometry.

The objectives of our education system are to train individuals who think critically, analytically, innovatively think, question and interpret, that is, high level cognitive skills.

Therefore, while preparing our book, the necessary methods are taken into consideration in order to support the student in many ways and to facilitate learning.

The content of the unit, the difficulty and ease of the subjects, the likelihood of questions

coming from the university exam have been measured in determining the number of tests.

The content of the question is based on the achievements determined by the MEB The Head Council of Education and Morality.

Wishing our book will provide you with sufficient efficiency...

Ömer Faruk CANER

You can send your suggestions, requests and thoughts about the book to the following e-mail addresses.

omercaner@yosdershanesi.com

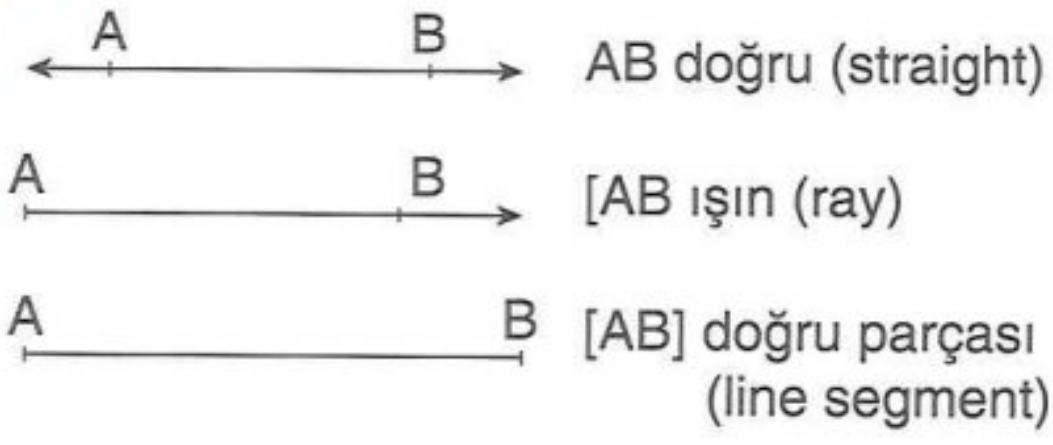
CANER
eğitim kurumları

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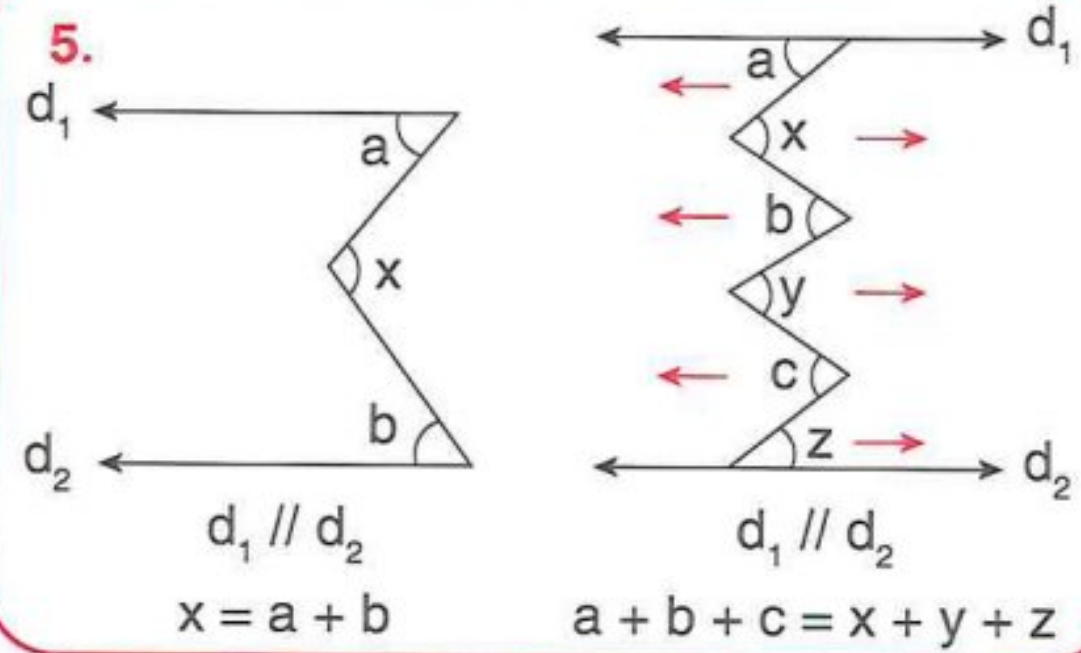
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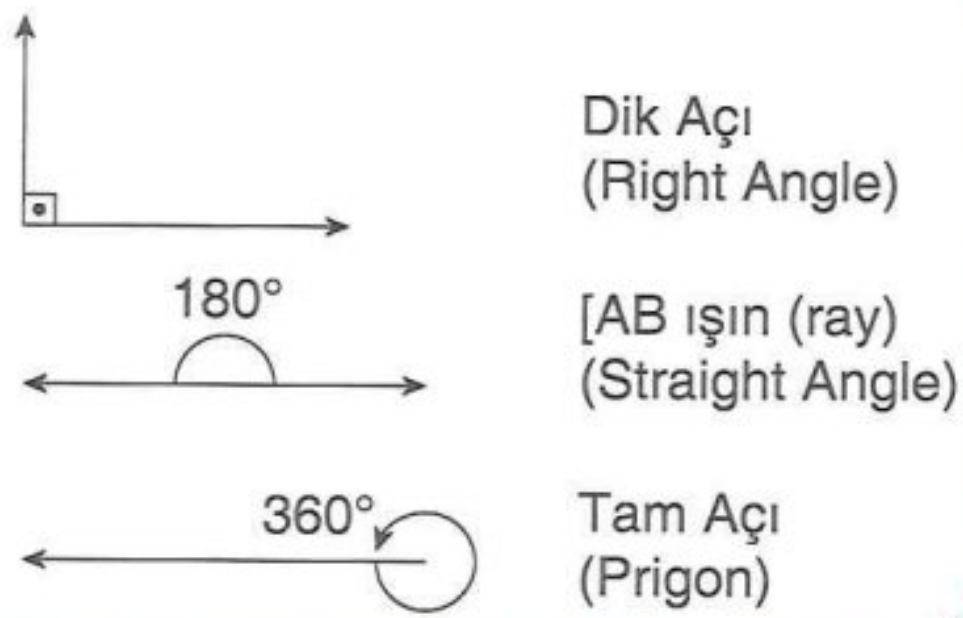
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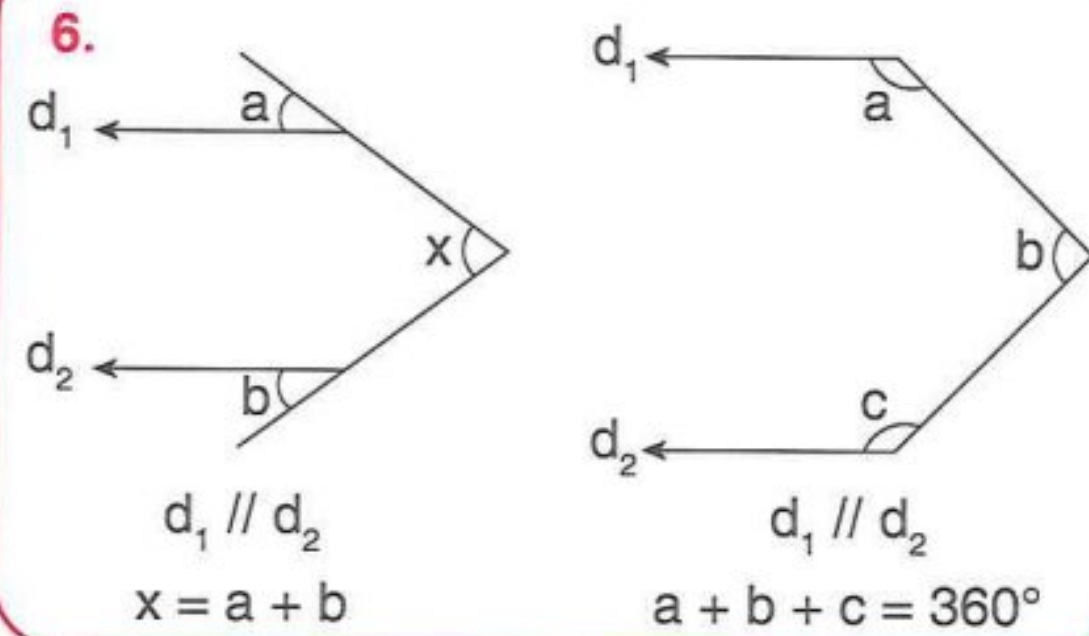
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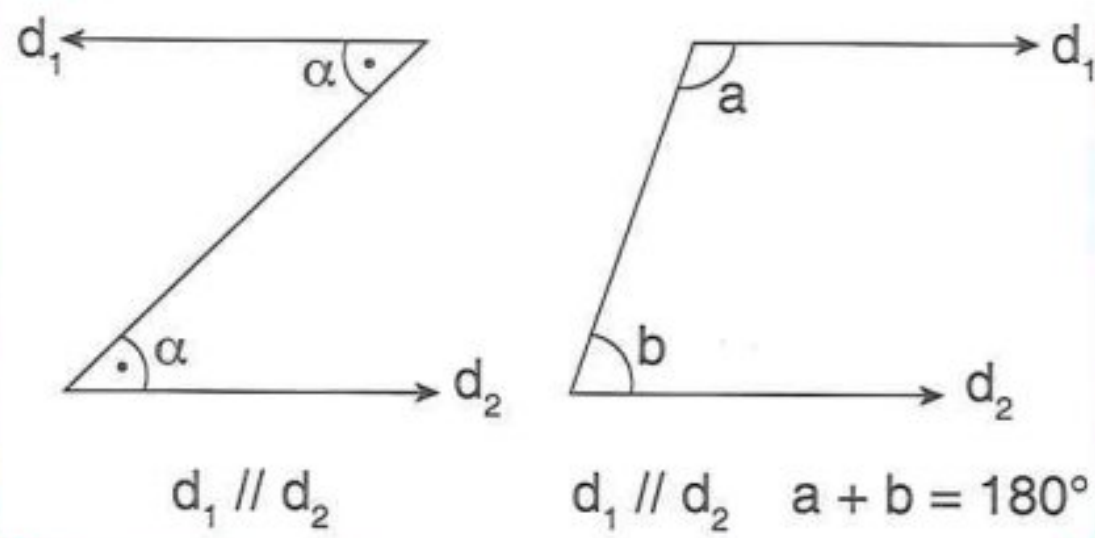
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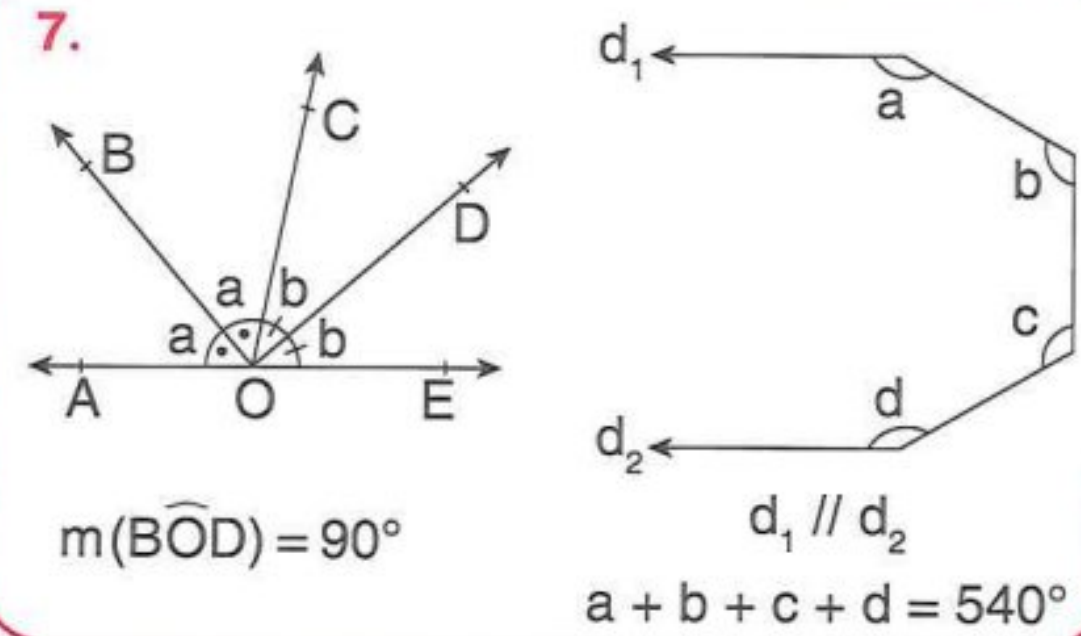
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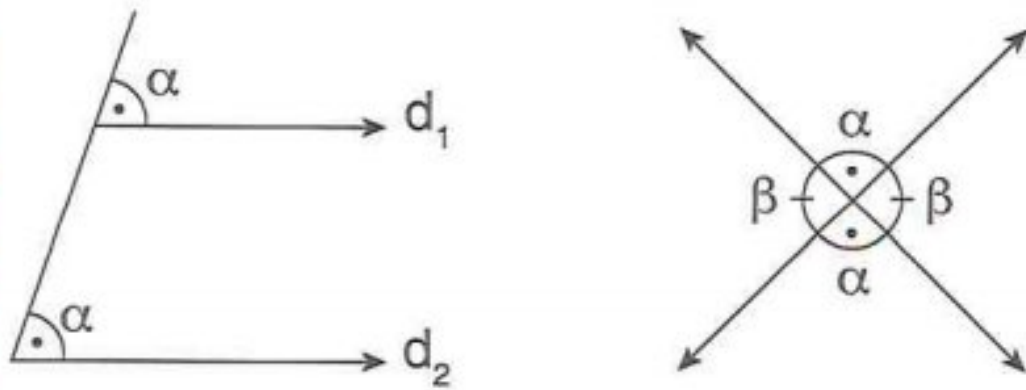
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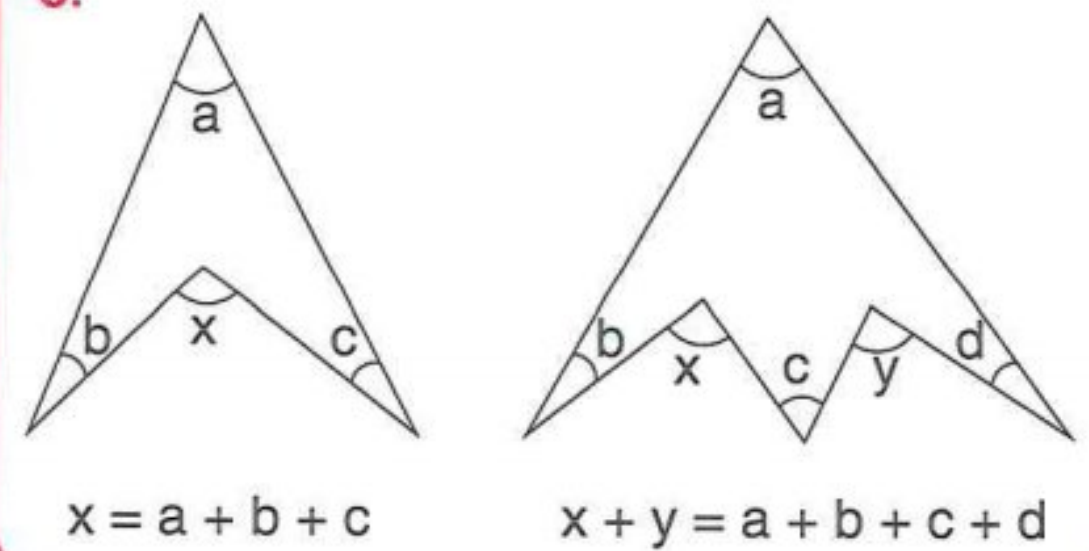
7.



4.



8.





AÇILAR ANGLES

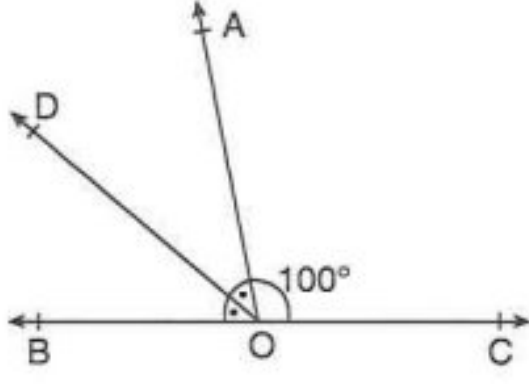
**KONU
KAVRAMA
TESTİ**
*Thread Grip
Test*

**ZİHİN
HARİTASI**
Mind Map

**8
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Tests

**144
SORU**
Questions

1.



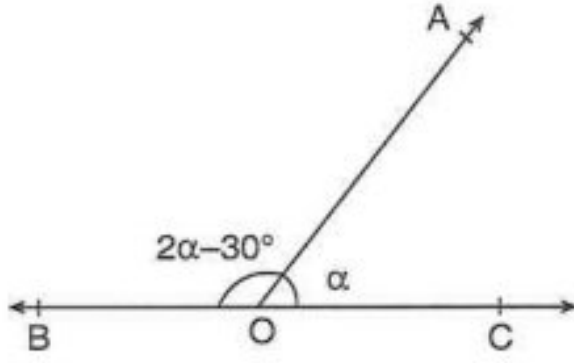
$$m(\widehat{AOC}) = 100^\circ$$

$$m(\widehat{AOD}) = m(\widehat{DOB})$$

$$\Rightarrow m(\widehat{AOD}) = ?$$

- A) 20° B) 30° C) 40° D) 50° E) 60°

2.



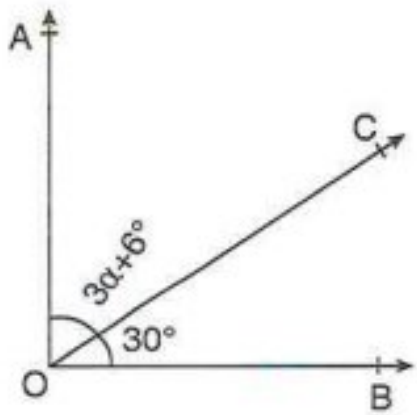
$$m(\widehat{AOC}) = \alpha$$

$$m(\widehat{AOB}) = 2\alpha - 30^\circ$$

$$\Rightarrow \alpha = ?$$

- A) 85° B) 80° C) 75° D) 70° E) 65°

3.



$$[OA \perp [OB$$

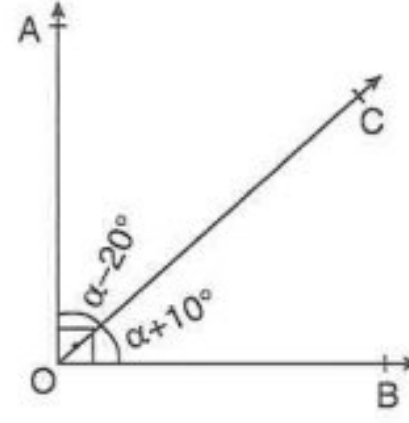
$$m(\widehat{AOC}) = 3\alpha + 6^\circ$$

$$m(\widehat{COB}) = 30^\circ$$

$$\Rightarrow \alpha = ?$$

- A) 18° B) 19° C) 20° D) 21° E) 22°

4.



$$[OA \perp [OB$$

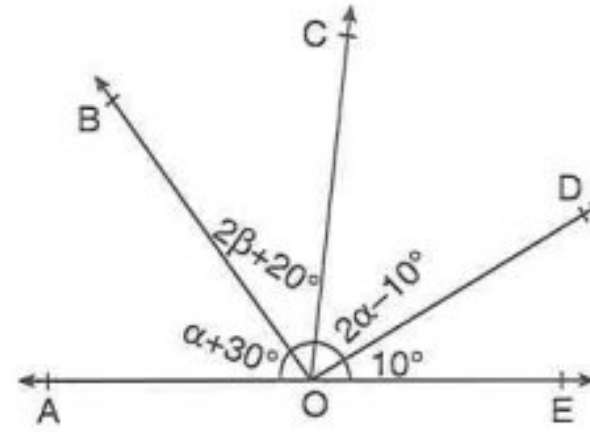
$$m(\widehat{AOC}) = \alpha - 20^\circ$$

$$m(\widehat{COB}) = \alpha + 10^\circ$$

$$\Rightarrow \alpha = ?$$

- A) 30° B) 40° C) 50° D) 60° E) 70°

5.

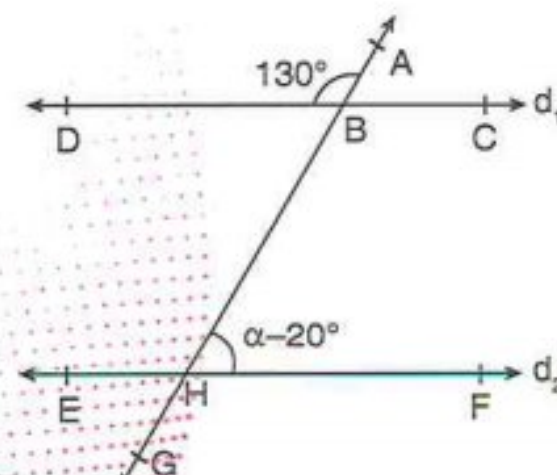


$$m(\widehat{AOC}) = m(\widehat{BOD})$$

$$\Rightarrow \beta = ?$$

- A) 5° B) 8° C) 13° D) 15° E) 20°

6.



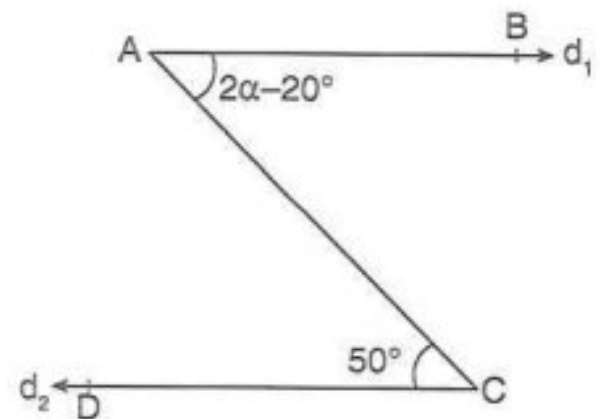
$$d_1 \parallel d_2$$

$$m(\widehat{ABD}) = 130^\circ$$

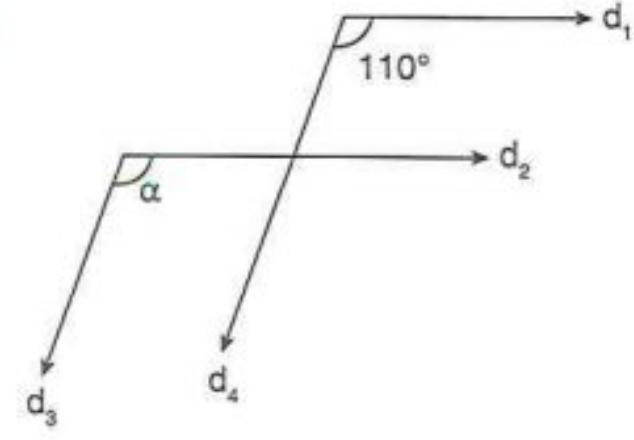
$$m(\widehat{BHF}) = \alpha - 20^\circ$$

$$\Rightarrow \alpha = ?$$

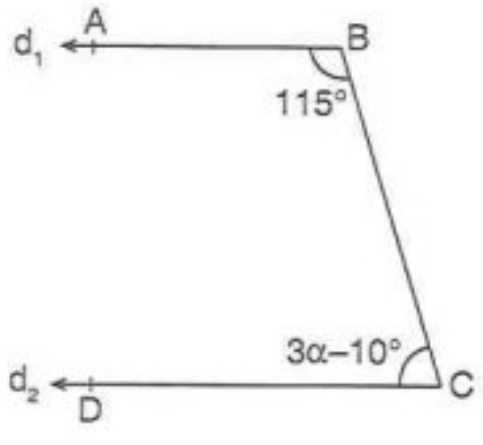
- A) 40° B) 50° C) 60° D) 70° E) 80°

7.  $d_1 \parallel d_2$
 $m(\widehat{BAC}) = 2\alpha - 20^\circ$
 $m(\widehat{ACD}) = 50^\circ$
 $\Rightarrow \alpha = ?$

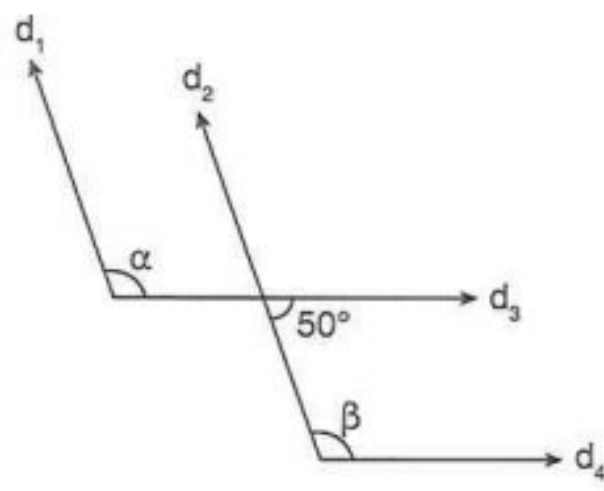
A) 20° B) 25° C) 30° D) 35° E) 40°

10.  $d_1 \parallel d_2$
 $d_3 \parallel d_4$
 $\Rightarrow \alpha = ?$

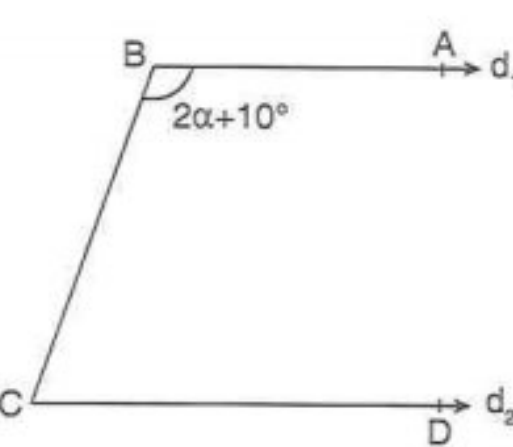
A) 70° B) 80° C) 90° D) 100° E) 110°

8.  $d_1 \parallel d_2$
 $\Rightarrow \alpha = ?$

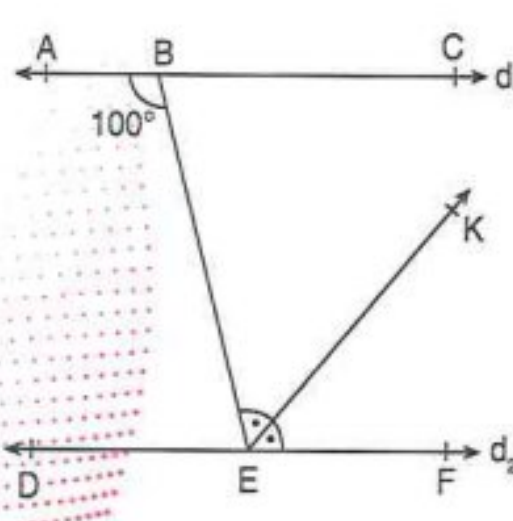
A) 45° B) 40° C) 35° D) 30° E) 25°

11.  $d_1 \parallel d_2$
 $d_3 \parallel d_4$
 $\Rightarrow \alpha + \beta = ?$

A) 100° B) 130° C) 160° D) 200° E) 260°

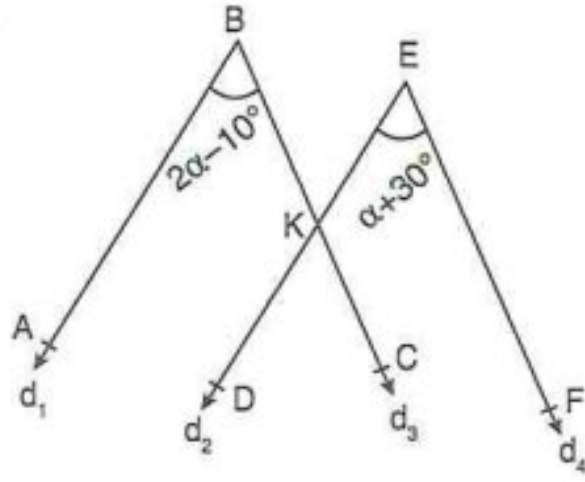
9.  $d_1 \parallel d_2$
 $m(\widehat{ABC}) = 2\alpha + 10^\circ$
 $m(\widehat{BCD}) = \alpha + 20^\circ$
 $\Rightarrow \alpha = ?$

A) 60° B) 50° C) 45° D) 40° E) 35°

12.  $d_1 \parallel d_2$
 $m(\widehat{ABE}) = 100^\circ$
 $m(\widehat{BEK}) = m(\widehat{KEF})$
 $\Rightarrow m(\widehat{BEK}) = ?$

A) 80° B) 70° C) 60° D) 50° E) 40°

13.



$$d_1 \parallel d_2$$

$$d_3 \parallel d_4$$

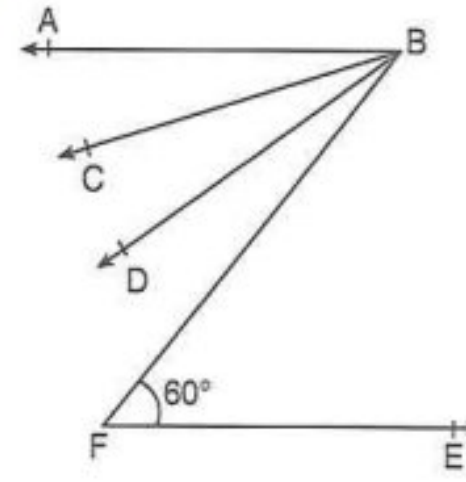
$$m(\widehat{ABC}) = 2\alpha - 10^\circ$$

$$m(\widehat{DEF}) = \alpha + 30^\circ$$

$$\Rightarrow m(\widehat{DKC}) = ?$$

- A) 50° B) 60° C) 70° D) 80° E) 90°

16.



$$[BA \parallel [FE$$

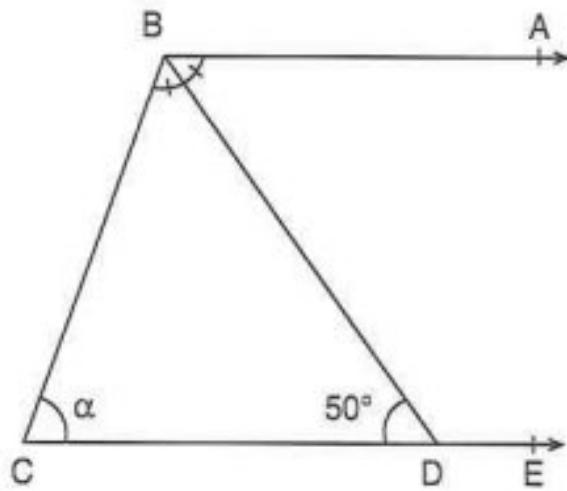
$$m(\widehat{ABC}) = m(\widehat{CBD}) = m(\widehat{DBF})$$

$$m(\widehat{BFE}) = 60^\circ$$

$$\Rightarrow m(\widehat{CBD}) = ?$$

- A) 15° B) 20° C) 25° D) 30° E) 35°

14.



$$[BA \parallel [CE$$

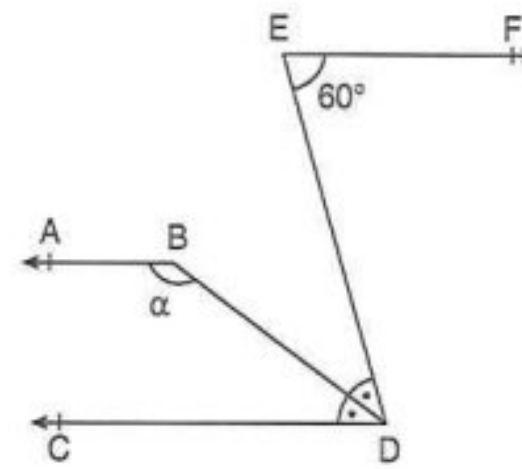
$$[BD] \text{ açıortay (bisector)}$$

$$m(\widehat{BDC}) = 50^\circ$$

$$\Rightarrow \alpha = ?$$

- A) 80° B) 75° C) 70° D) 65° E) 60°

17.



$$[EF \parallel [BA \parallel [DC$$

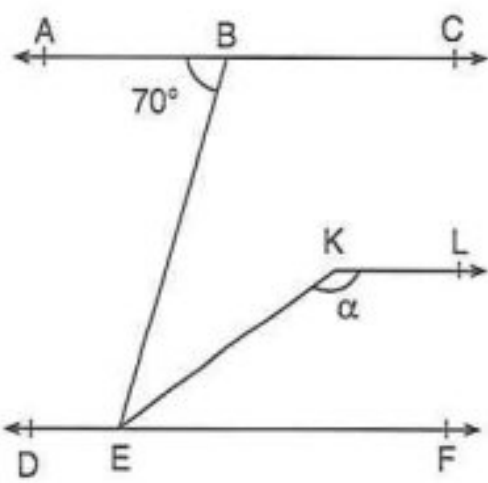
$$m(\widehat{EDB}) = m(\widehat{BDC})$$

$$m(\widehat{DEF}) = 60^\circ$$

$$\Rightarrow m(\widehat{ABD}) = \alpha = ?$$

- A) 130° B) 135° C) 145° D) 150° E) 155°

15.



$$AC \parallel [KL \parallel DF$$

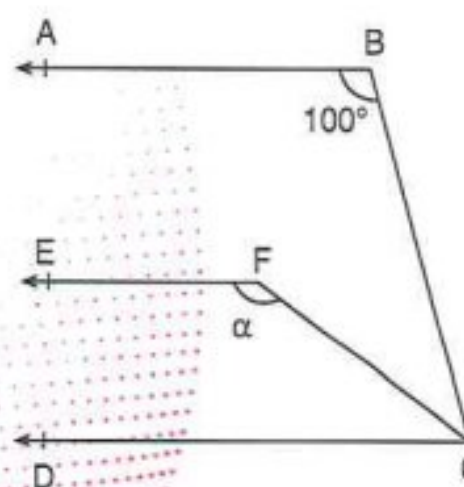
$$m(\widehat{BEK}) = m(\widehat{KEF})$$

$$m(\widehat{ABE}) = 70^\circ$$

$$\Rightarrow m(\widehat{EKL}) = \alpha = ?$$

- A) 125° B) 130° C) 135° D) 140° E) 145°

18.



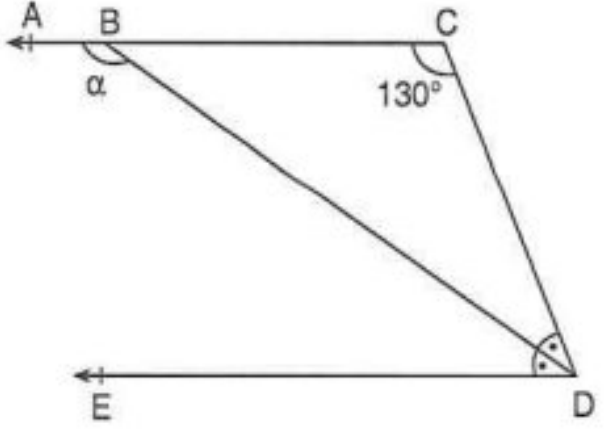
$$[BA \parallel [FE \parallel [CD$$

$$m(\widehat{ABC}) = 100^\circ$$

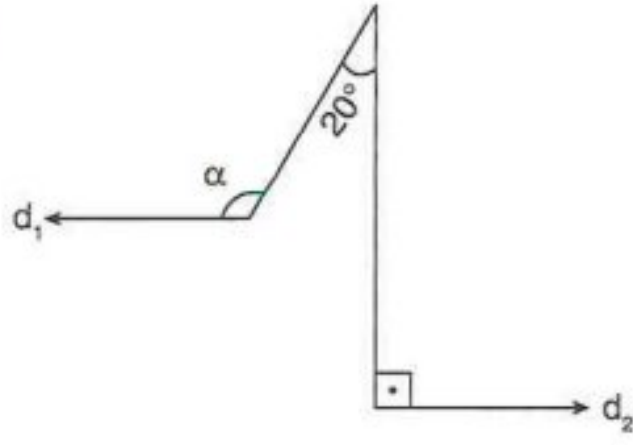
$$m(\widehat{BCF}) = 20^\circ$$

$$\Rightarrow m(\widehat{EFC}) = \alpha = ?$$

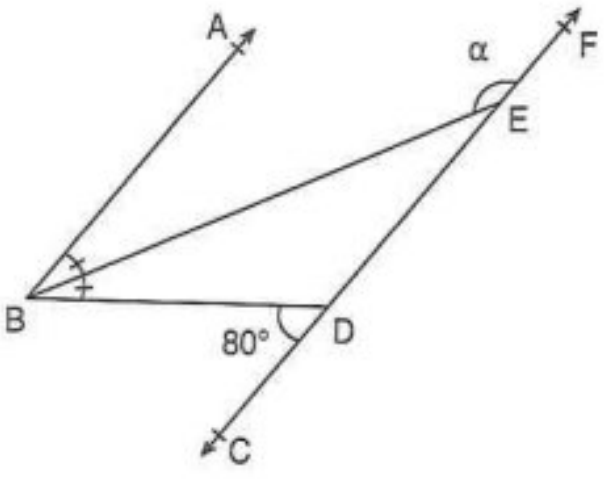
- A) 105° B) 110° C) 115° D) 120° E) 125°

19.  [CA // [DE
 $m(\widehat{ACD}) = 130^\circ$
 [BD] açıortay (*bisector*)
 $\Rightarrow m(\widehat{ABD}) = ?$

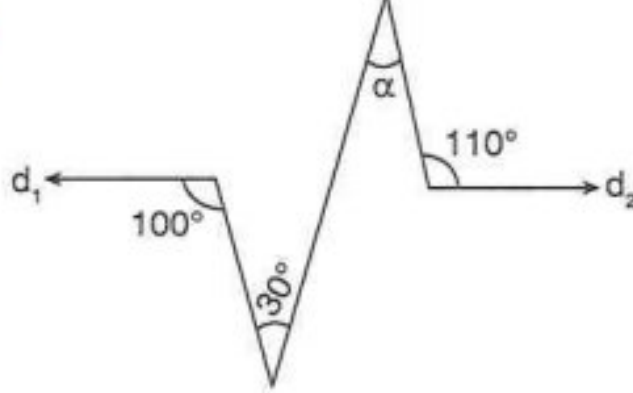
A) 145° B) 150° C) 155° D) 160° E) 165°

22.  $d_1 // d_2$
 $\Rightarrow \alpha = ?$

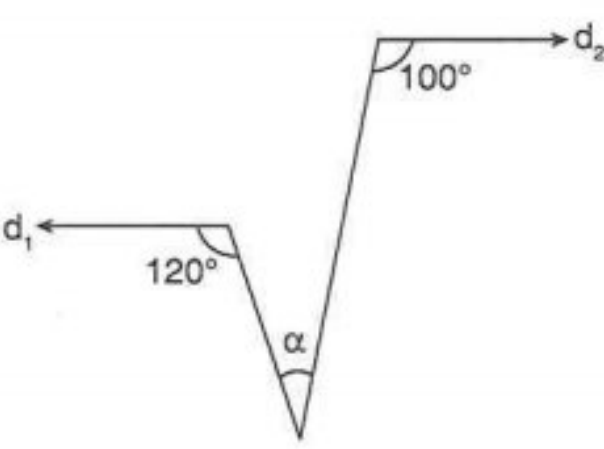
A) 95° B) 105° C) 110° D) 115° E) 120°

20.  [BA // CF
 $m(\widehat{BDC}) = 80^\circ$
 $m(\widehat{ABE}) = m(\widehat{EBD})$
 $\Rightarrow m(\widehat{BEF}) = \alpha = ?$

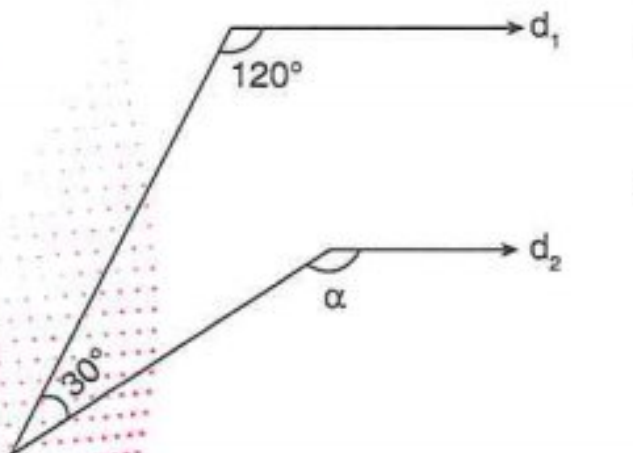
A) 145° B) 140° C) 130° D) 125° E) 115°

23.  $d_1 // d_2$
 $\Rightarrow \alpha = ?$

A) 30° B) 40° C) 50° D) 60° E) 70°

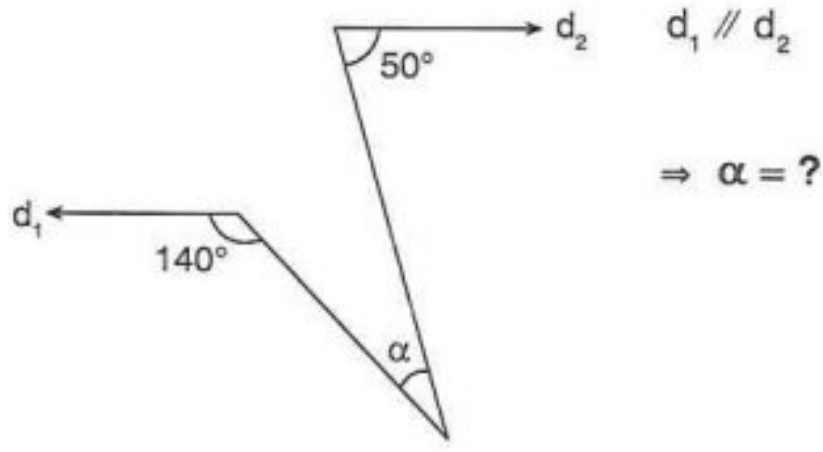
21.  $d_1 // d_2$
 $\Rightarrow \alpha = ?$

A) 10° B) 20° C) 30° D) 40° E) 50°

24.  $d_1 // d_2$
 $\Rightarrow \alpha = ?$

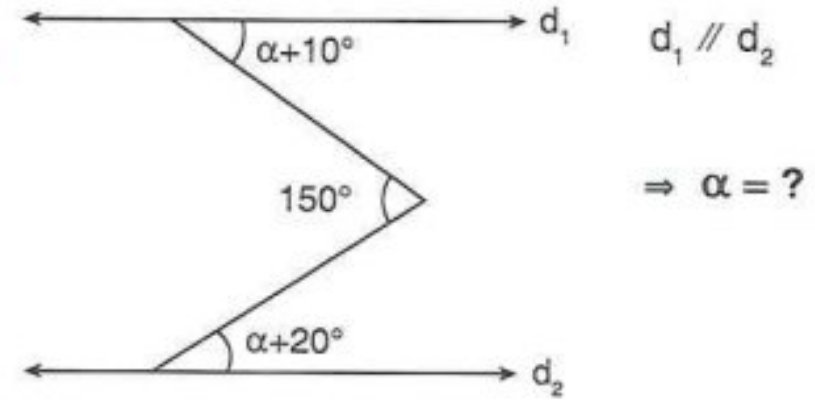
A) 140° B) 145° C) 150° D) 155° E) 160°

25.



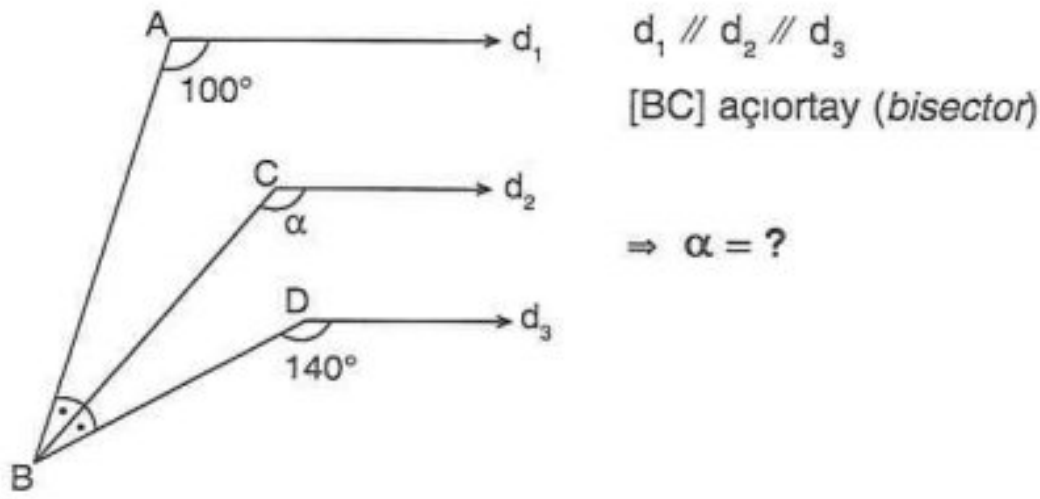
- A) 5° B) 10° C) 15° D) 20° E) 25°

28.



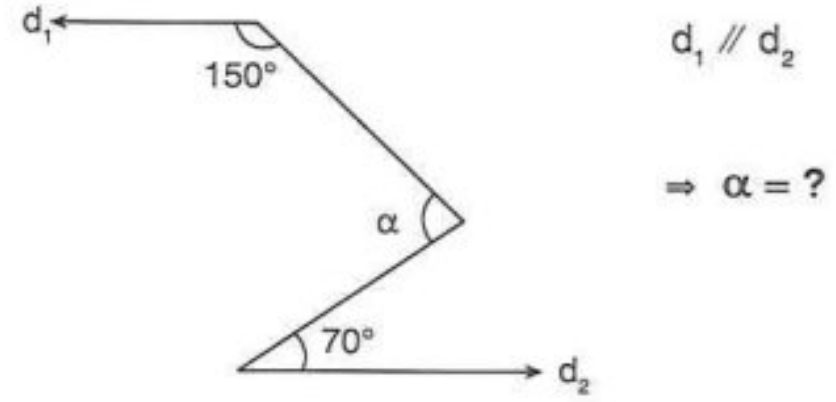
- A) 100° B) 75° C) 65° D) 60° E) 55°

26.



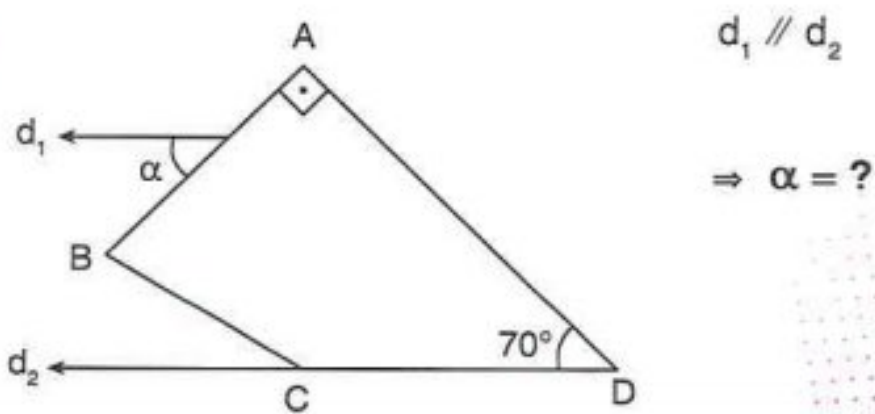
- A) 80° B) 90° C) 100° D) 110° E) 120°

29.



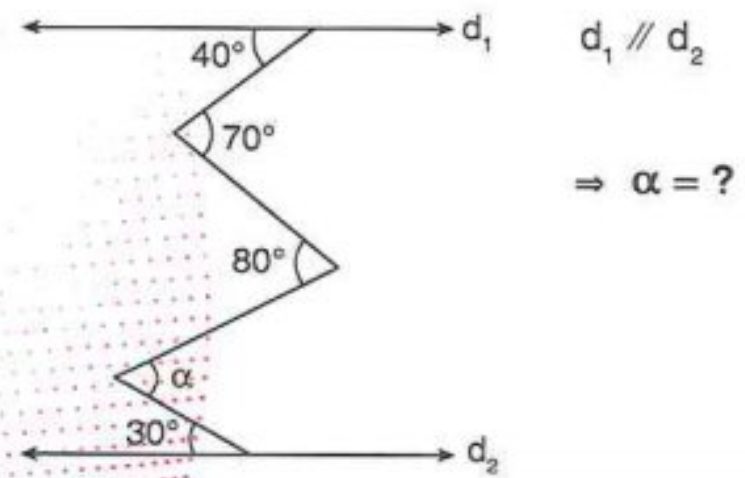
- A) 120° B) 110° C) 100° D) 90° E) 80°

27.



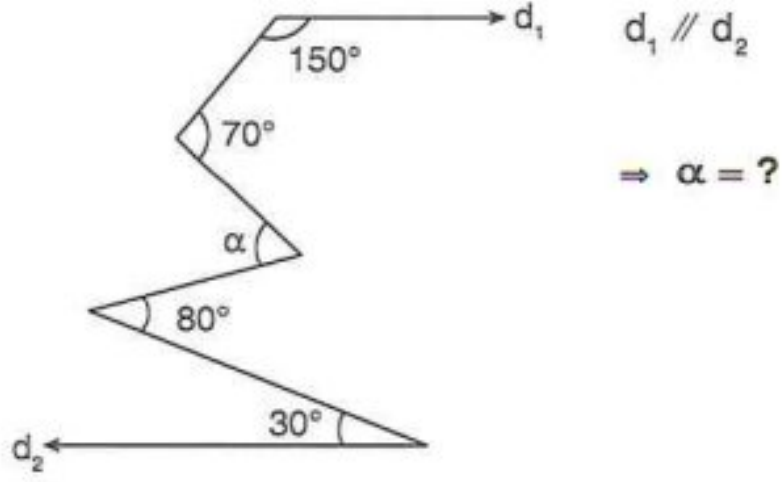
- A) 20° B) 30° C) 40° D) 50° E) 60°

30.



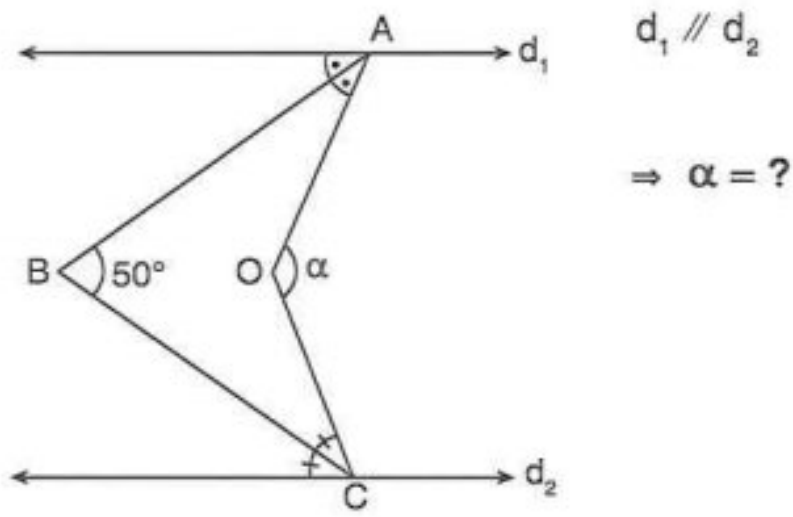
- A) 120° B) 100° C) 90° D) 80° E) 70°

31.



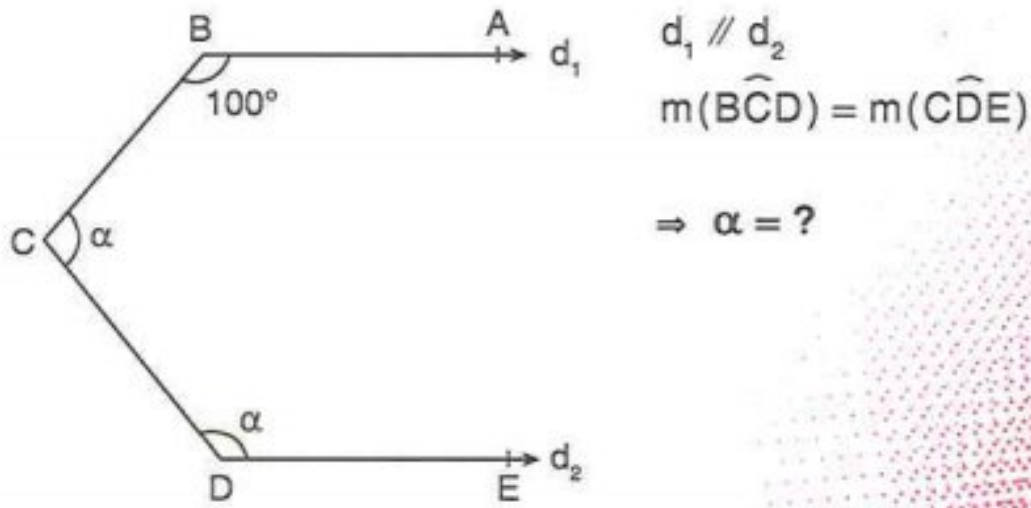
- A) 110° B) 100° C) 90° D) 85° E) 75°

32.



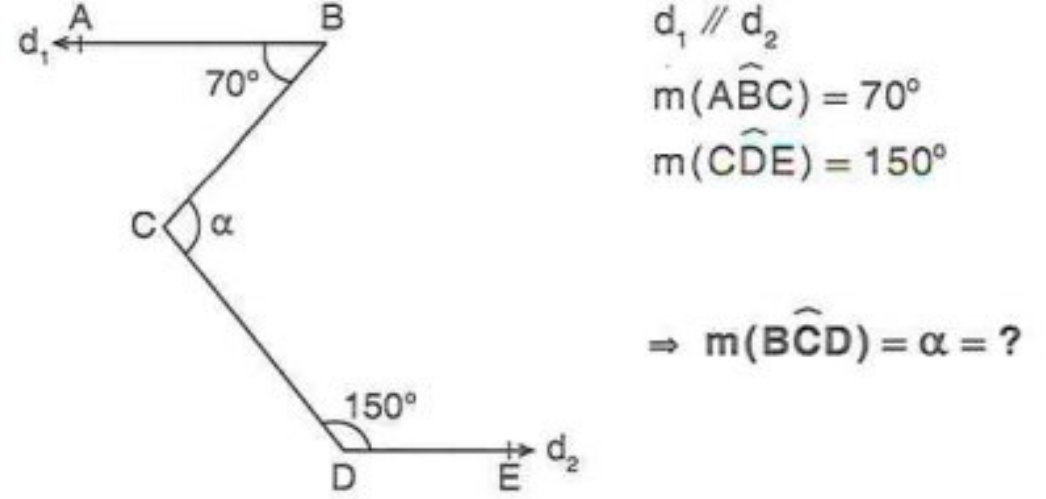
- A) 130° B) 120° C) 110° D) 100° E) 90°

33.



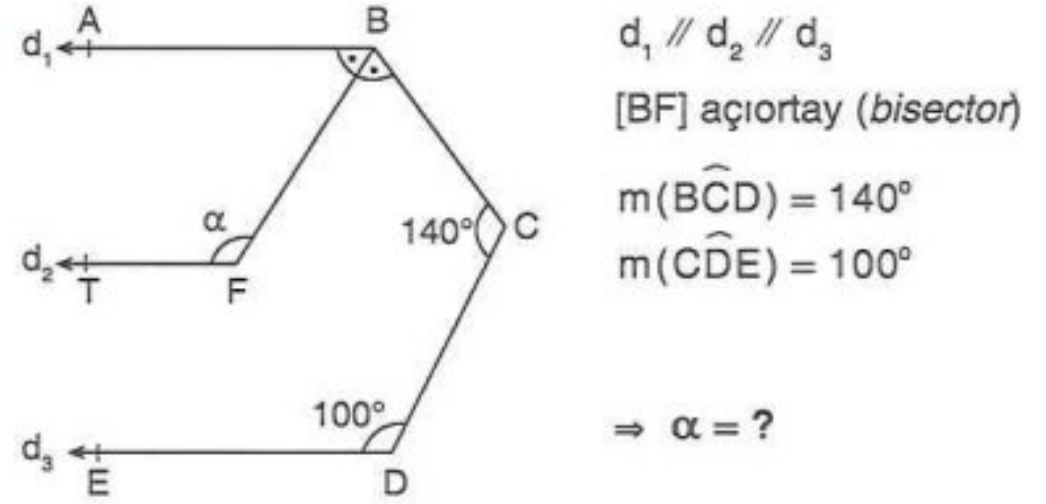
- A) 100° B) 110° C) 120° D) 130° E) 140°

34.



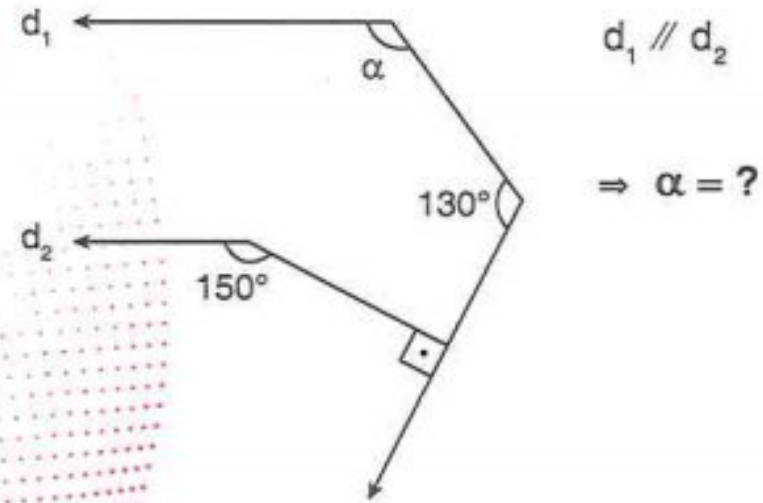
- A) 70° B) 80° C) 90° D) 100° E) 110°

35.

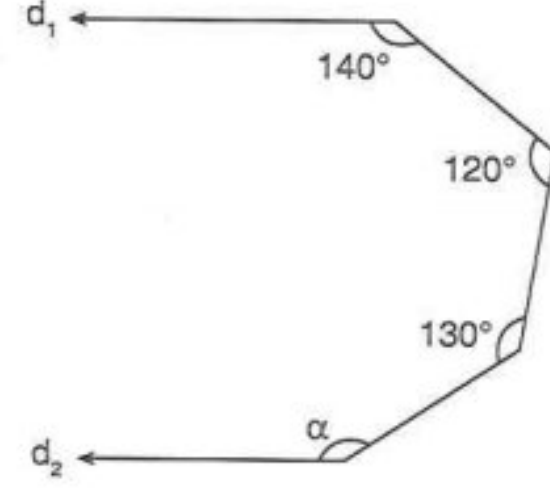


- A) 80° B) 90° C) 110° D) 120° E) 150°

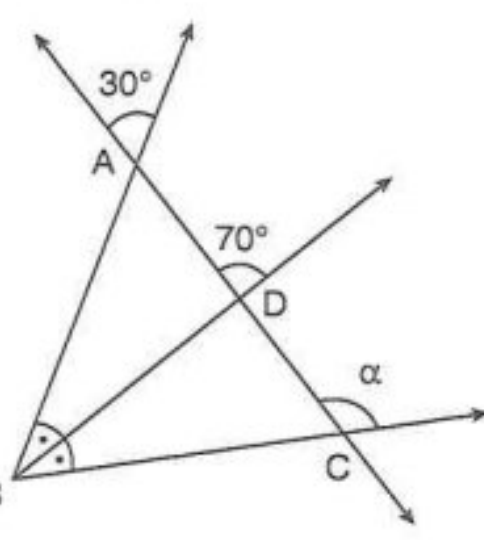
36.



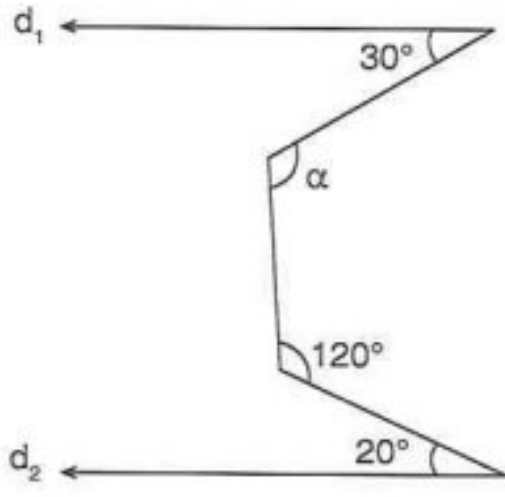
- A) 110° B) 125° C) 130° D) 140° E) 150°

37.  $d_1 \parallel d_2$
 $\Rightarrow \alpha = ?$

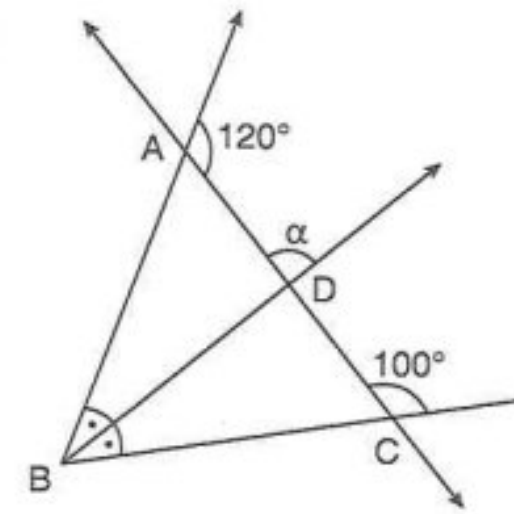
A) 135° B) 140° C) 145° D) 150° E) 155°

40.  [BD] açıortay (bisector)
 $\Rightarrow \alpha = ?$

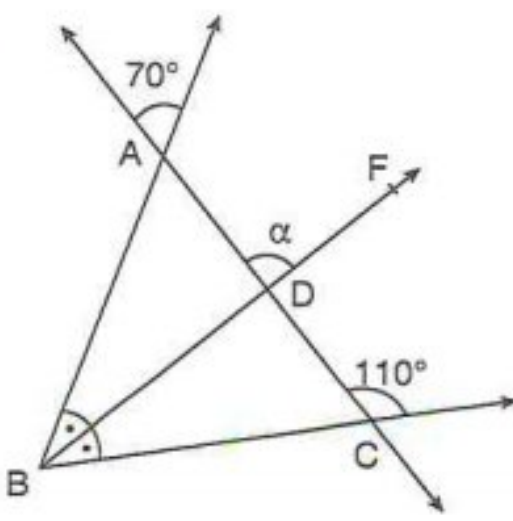
A) 120° B) 110° C) 100° D) 90° E) 80°

38.  $d_1 \parallel d_2$
 $\Rightarrow \alpha = ?$

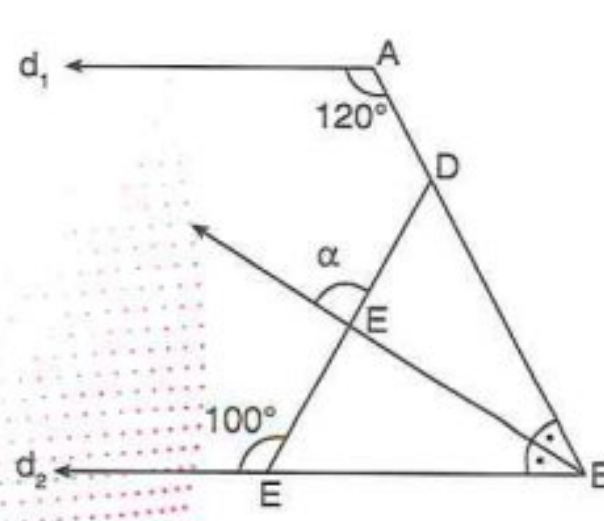
A) 115° B) 110° C) 105° D) 100° E) 95°

41.  [BD] açıortay (bisector)
 $\Rightarrow \alpha = ?$

A) 80° B) 90° C) 100° D) 110° E) 120°

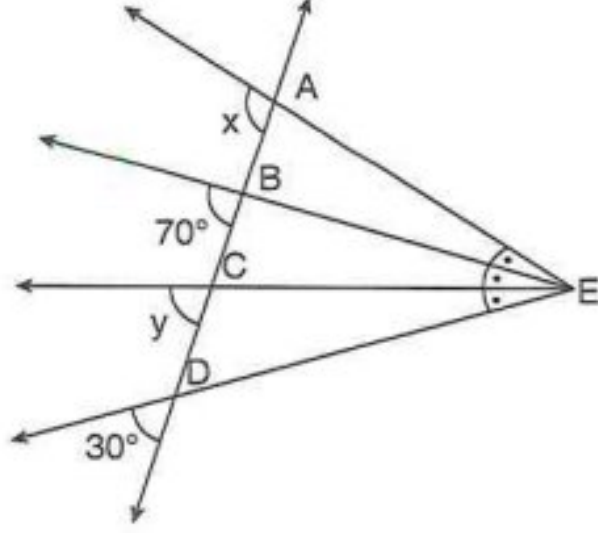
39.  [BF] açıortay (bisector)
 $\Rightarrow \alpha = ?$

A) 130° B) 110° C) 100° D) 95° E) 90°

42.  [BE] açıortay (bisector)
 $d_1 \parallel d_2$
 $\Rightarrow \alpha = ?$

A) 60° B) 70° C) 80° D) 85° E) 90°

43.

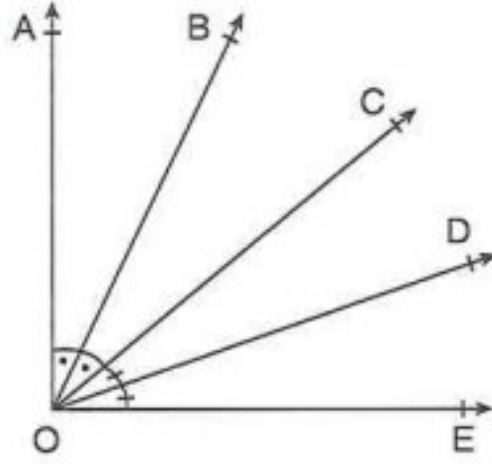


[EB], [EC] açıortay (bisector)

$$\Rightarrow x - y = ?$$

- A) 80° B) 70° C) 60° D) 50° E) 40°

44.

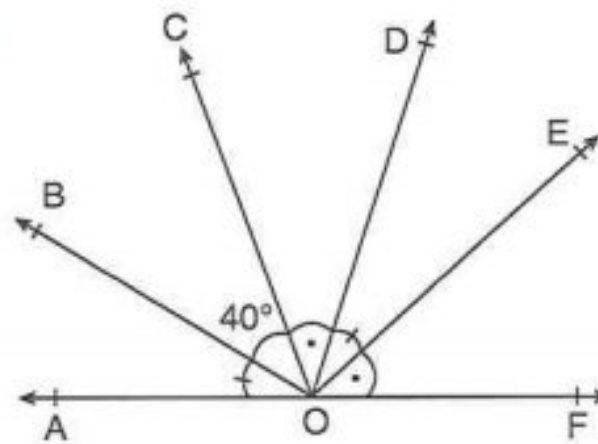


[OA] \perp [OE]
[OB], [OD] açıortay (bisector)

$$\Rightarrow m(\widehat{BOD}) = ?$$

- A) 45° B) 50° C) 60° D) 70° E) 90°

45.

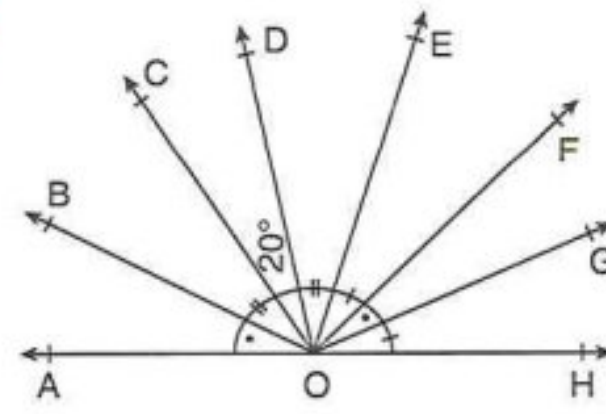


$m(\widehat{BOA}) = m(\widehat{DOE})$
 $m(\widehat{COD}) = m(\widehat{EOF})$
 $m(\widehat{BOC}) = 40^\circ$

$$\Rightarrow m(\widehat{AOD}) = ?$$

- A) 70° B) 85° C) 90° D) 95° E) 110°

46.

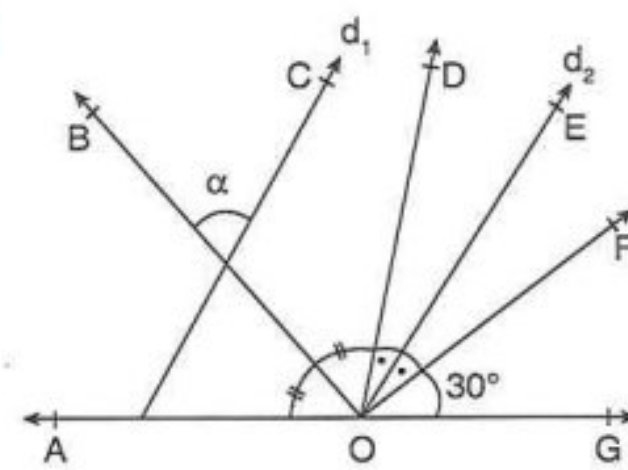


$m(\widehat{AOB}) = m(\widehat{FOG})$
 $m(\widehat{BOC}) = m(\widehat{DOE})$
 $m(\widehat{EOF}) = m(\widehat{GOH})$

$$\Rightarrow m(\widehat{DOG}) = ?$$

- A) 50° B) 60° C) 70° D) 80° E) 90°

47.

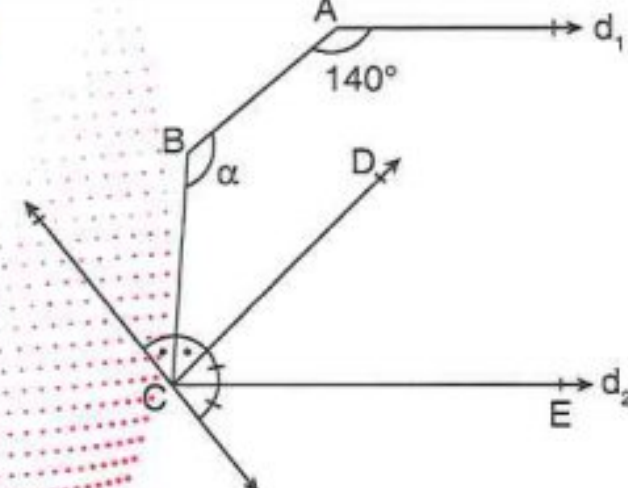


$d_1 \parallel d_2$
[OB], [OE] açıortay (bisector)

$$\Rightarrow \alpha = ?$$

- A) 105° B) 90° C) 85° D) 75° E) 60°

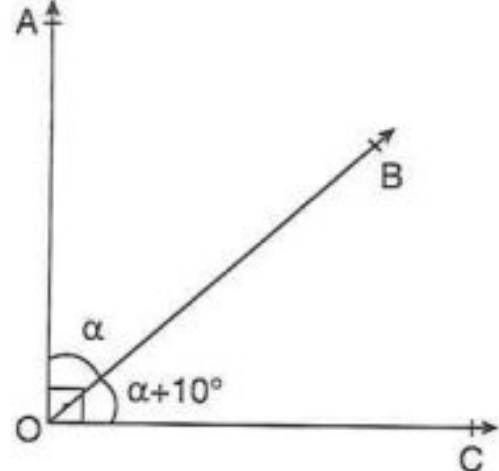
48.



$d_1 \parallel d_2$
[CB], [CE] açıortay (bisector)

$$\Rightarrow \alpha = ?$$

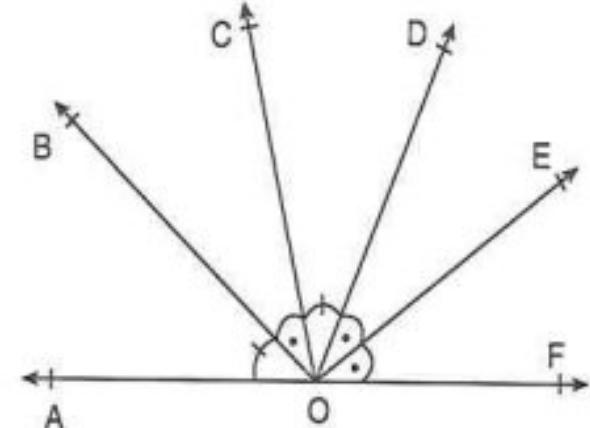
- A) 70° B) 80° C) 95° D) 120° E) 130°

1. 

$[OA \perp [OC$
 $m(\widehat{AOB}) = \alpha$
 $m(\widehat{COB}) = \alpha + 10^\circ$

$\Rightarrow \alpha = ?$

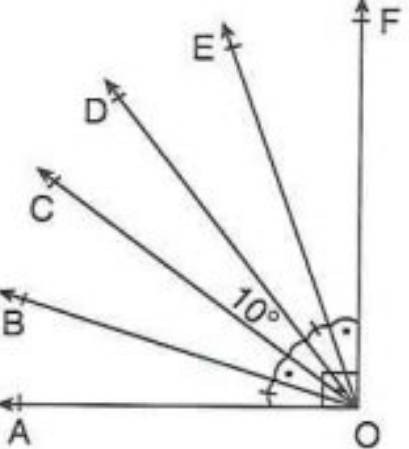
A) 20° B) 30° C) 40° D) 50° E) 60°

4. 

$m(\widehat{AOB}) = m(\widehat{COD})$
 $m(\widehat{BOC}) = m(\widehat{DOE}) = m(\widehat{EOF})$
 $m(\widehat{COD}) = 15^\circ$

$\Rightarrow m(\widehat{BOE}) = ?$

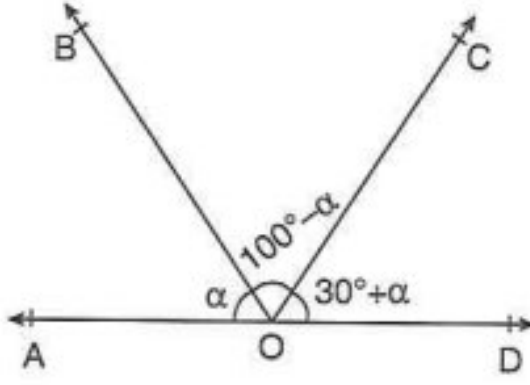
A) 65° B) 75° C) 85° D) 115° E) 135°

2. 

$[OF \perp [OA$
 $m(\widehat{EOF}) = m(\widehat{BOC})$
 $m(\widehat{AOB}) = m(\widehat{DOE})$
 $m(\widehat{COD}) = 10^\circ$

$\Rightarrow m(\widehat{BOE}) = ?$

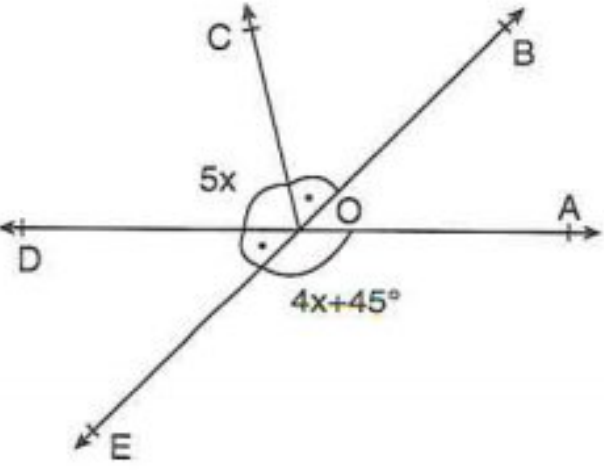
A) 40° B) 50° C) 60° D) 70° E) 80°

5. 

$m(\widehat{AOB}) = \alpha$
 $m(\widehat{BOC}) = 100^\circ - \alpha$
 $m(\widehat{COD}) = \alpha + 30^\circ$

$\Rightarrow \alpha = ?$

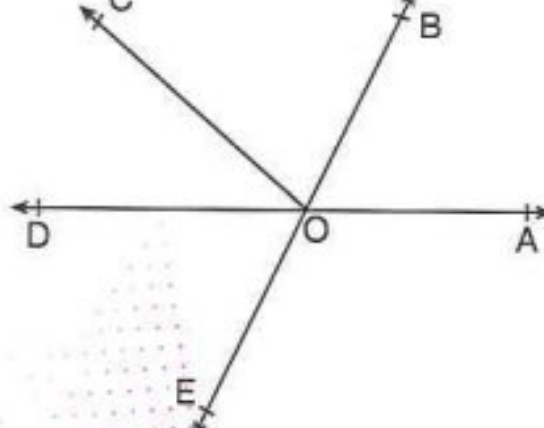
A) 30° B) 40° C) 50° D) 60° E) 70°

3. 

$m(\widehat{DOE}) = m(\widehat{COB})$
 $m(\widehat{AOE}) = 4x + 45^\circ$
 $m(\widehat{DOC}) = 5x$

$\Rightarrow x = ?$

A) 10° B) 15° C) 20° D) 25° E) 30°

6. 

$m(\widehat{DOE}) = 2m(\widehat{COB}) = m(\widehat{DOC}) + 20$

$\Rightarrow m(\widehat{EOA}) = ?$

A) 110° B) 100° C) 90° D) 80° E) 70°

7.

[OE ⊥ [OA
 $m(\widehat{DOC}) = 2m(\widehat{COB}) = 4m(\widehat{BOA})$
 $m(\widehat{EOD}) = m(\widehat{COB})$
 $\Rightarrow m(\widehat{DOB}) = ?$

A) 10° B) 20° C) 30° D) 60° E) 70°

10.

AB // CD
 $m(\widehat{EFB}) = 35^\circ$
 $m(\widehat{EGD}) = \alpha - 20^\circ$
 $\Rightarrow \alpha = ?$

A) 55° B) 40° C) 35° D) 30° E) 25°

8.

$m(\widehat{BOC}) = 20^\circ + x$
 $m(\widehat{COD}) = 110^\circ$
 $m(\widehat{DOA}) = 130^\circ - x$
 $\Rightarrow m(\widehat{AOB}) = ?$

A) 90° B) 100° C) 120° D) 130° E) 140°

11.

[BA // [DE
 $m(\widehat{ABC}) = 2\alpha - 10^\circ$
 $m(\widehat{BCD}) = \alpha$
 $m(\widehat{CDE}) = 150^\circ$
 $\Rightarrow \alpha = ?$

A) 10° B) 20° C) 30° D) 40° E) 50°

9.

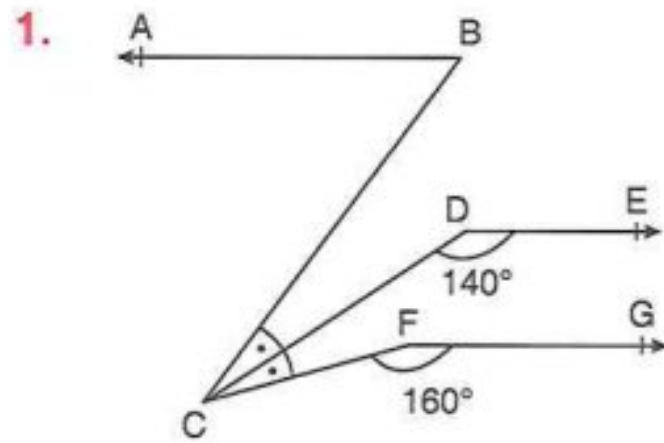
[BA // [DE
 $m(\widehat{ABC}) = 70^\circ$
 $m(\widehat{CDE}) = 130^\circ$
 $\Rightarrow m(\widehat{BCD}) = ?$

A) 20° B) 30° C) 40° D) 50° E) 60°

12.

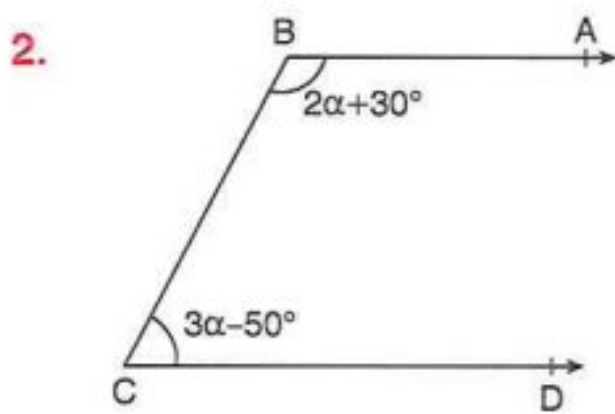
[BA // [CD
 $m(\widehat{DCH}) = m(\widehat{BCE})$
 $m(\widehat{HCG}) = m(\widehat{ECF})$
 $m(\widehat{GCF}) = 20^\circ$
 $m(\widehat{ABC}) = 90^\circ$
 $\Rightarrow m(\widehat{DCF}) = ?$

A) 40° B) 45° C) 50° D) 55° E) 65°



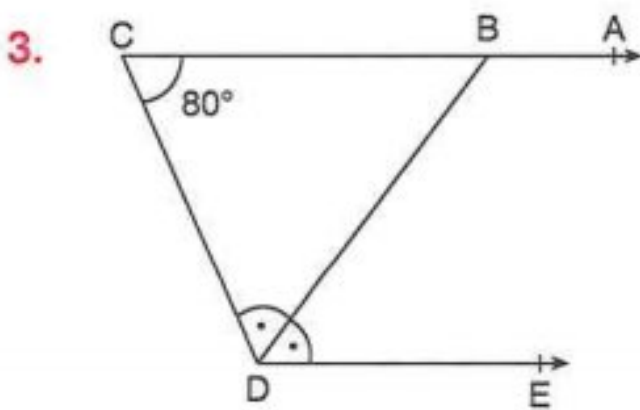
[BA // [DE // [FG
 $m(\widehat{BCD}) = m(\widehat{DCF})$
 $m(\widehat{CFG}) = 160^\circ$
 $m(\widehat{CDE}) = 140^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

- A) 40° B) 50° C) 60° D) 70° E) 80°



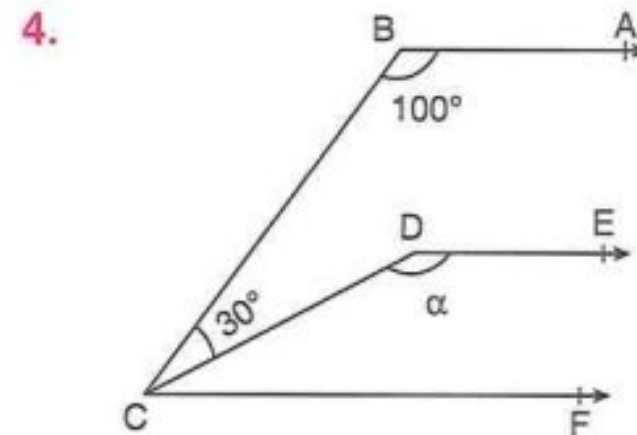
[BA // [CD
 $m(\widehat{ABC}) = 2\alpha + 30^\circ$
 $m(\widehat{BCD}) = 3\alpha - 50^\circ$
 $\Rightarrow \alpha = ?$

- A) 40° B) 50° C) 55° D) 65° E) 80°



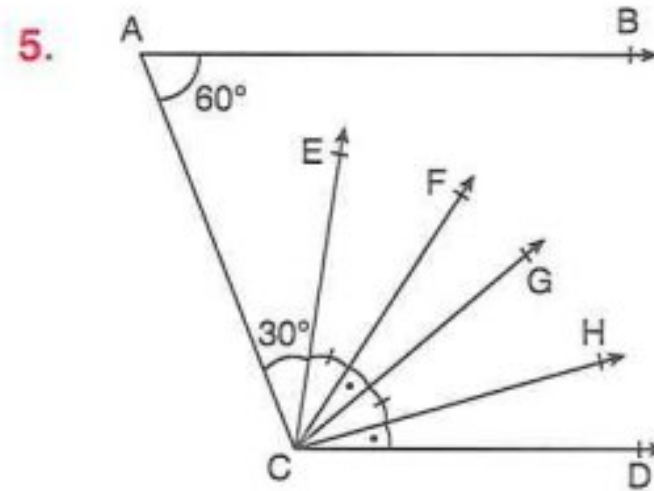
[CA // [DE
 $m(\widehat{CDB}) = m(\widehat{BDE})$
 $m(\widehat{ACD}) = 80^\circ$
 $\Rightarrow m(\widehat{ABD}) = ?$

- A) 90° B) 100° C) 110° D) 120° E) 130°



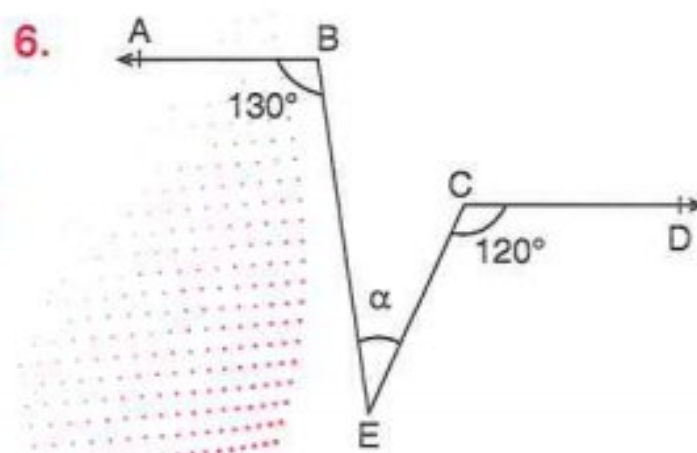
[BA // [DE // [CF
 $m(\widehat{ABC}) = 100^\circ$
 $m(\widehat{BCD}) = 30^\circ$
 $\Rightarrow m(\widehat{CDE}) = ?$

- A) 100° B) 110° C) 120° D) 130° E) 150°



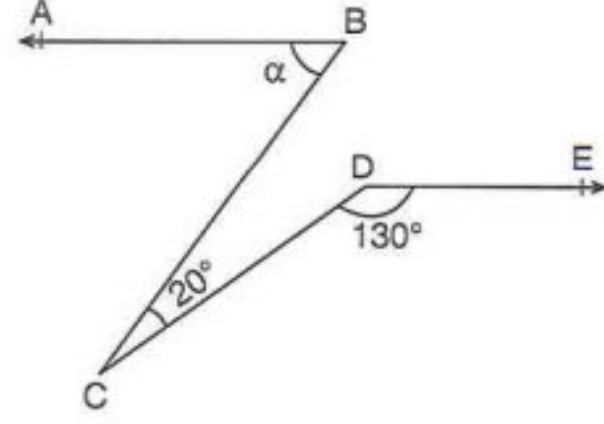
[AB // [CD
 $m(\widehat{BAC}) = 60^\circ$
 $m(\widehat{ACE}) = 30^\circ$
 $m(\widehat{ECF}) = m(\widehat{GCH})$
 $m(\widehat{FCG}) = m(\widehat{HCD})$
 $\Rightarrow m(\widehat{FCH}) = ?$

- A) 45° B) 50° C) 55° D) 60° E) 65°

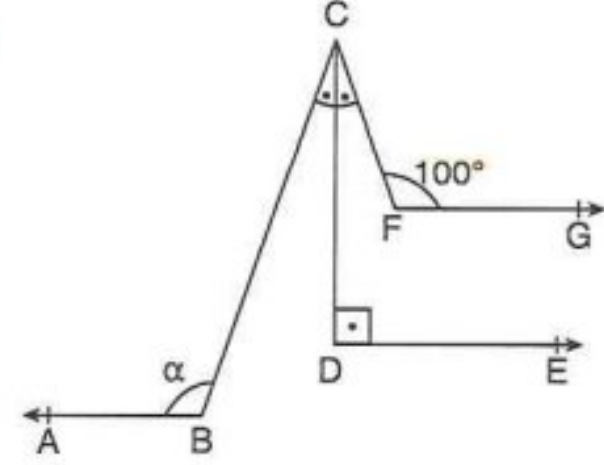


[BA // [CD
 $m(\widehat{ABC}) = 130^\circ$
 $m(\widehat{ECD}) = 120^\circ$
 $\Rightarrow m(\widehat{BEC}) = \alpha = ?$

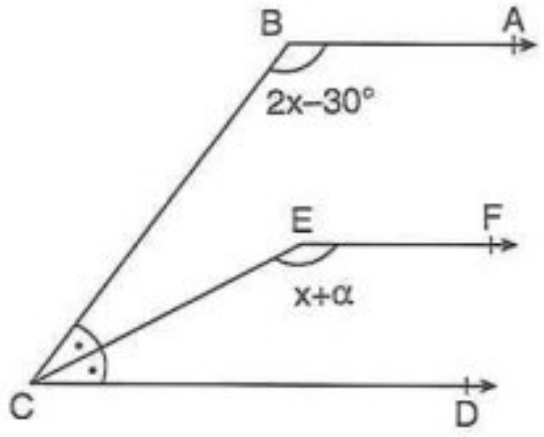
- A) 40° B) 50° C) 60° D) 70° E) 80°

7.  $[BA \parallel [DE$
 $m(\widehat{BCD}) = 20^\circ$
 $m(\widehat{CDE}) = 130^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

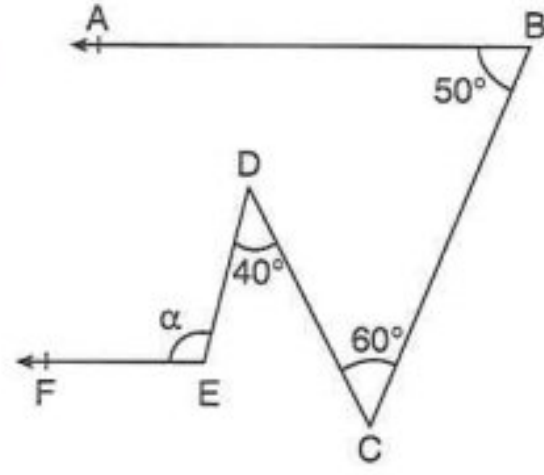
A) 40° B) 50° C) 60° D) 70° E) 80°

10.  $[BA \parallel [FG \parallel [DE$
 $[CD] \perp [DE$
 $m(\widehat{CFG}) = 100^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

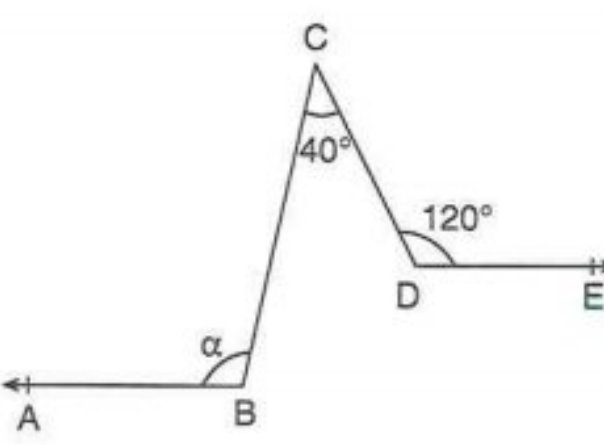
A) 90° B) 100° C) 110° D) 120° E) 130°

8.  $[BA \parallel [EF \parallel [CD$
 $m(\widehat{ABC}) = 2x - 30^\circ$
 $m(\widehat{FEC}) = x + \alpha$
 $m(\widehat{BCE}) = m(\widehat{ECD})$
 $\Rightarrow \alpha = ?$

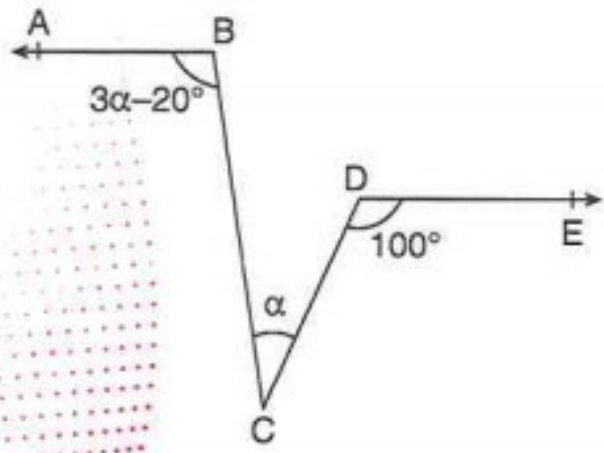
A) 75° B) 65° C) 60° D) 55° E) 50°

11.  $[BA \parallel [EF$
 $m(\widehat{ABC}) = 50^\circ$
 $m(\widehat{DCB}) = 60^\circ$
 $m(\widehat{EDC}) = 40^\circ$
 $\Rightarrow m(\widehat{FED}) = \alpha = ?$

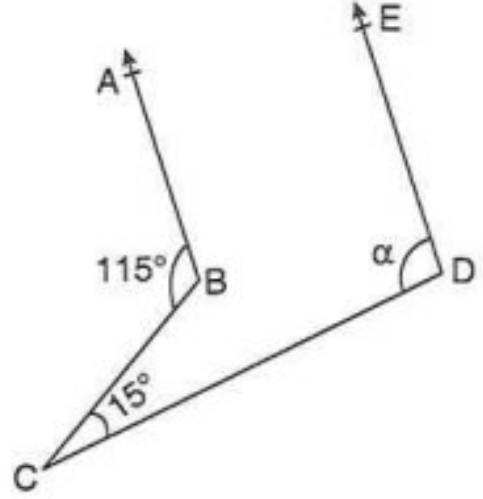
A) 95° B) 100° C) 105° D) 110° E) 120°

9.  $[BA \parallel [DE$
 $m(\widehat{EDC}) = 120^\circ$
 $m(\widehat{BCD}) = 40^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

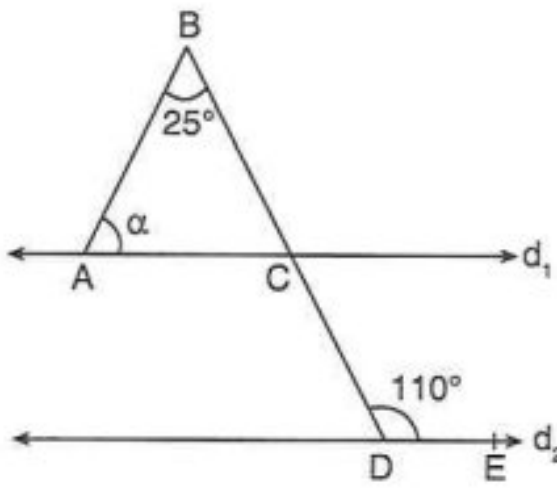
A) 70° B) 80° C) 90° D) 100° E) 120°

12.  $[BA \parallel [DE$
 $m(\widehat{ABC}) = 3\alpha - 20^\circ$
 $m(\widehat{CDE}) = 100^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

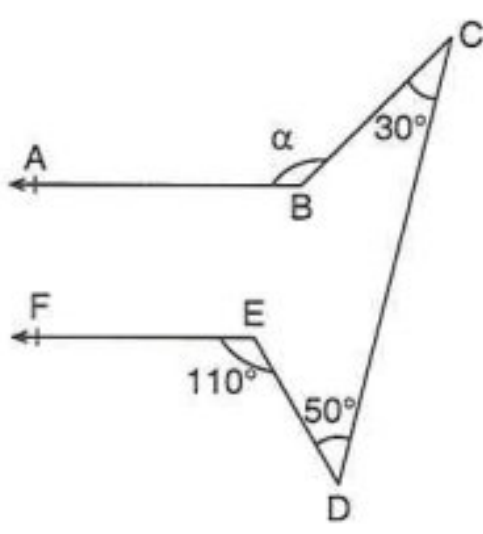
A) 50° B) 60° C) 70° D) 80° E) 90°

1.  $[BA \parallel [DE$
 $m(\widehat{ABC}) = 115^\circ$
 $m(\widehat{BCD}) = 15^\circ$
 $\Rightarrow m(\widehat{CDE}) = \alpha = ?$

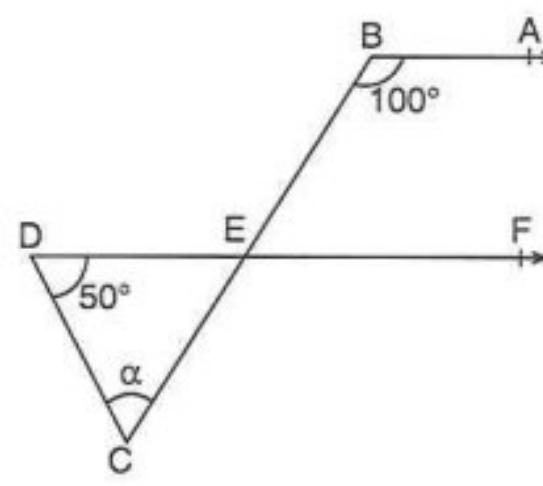
A) 90° B) 100° C) 110° D) 120° E) 130°

4.  $d_1 \parallel d_2$
 $m(\widehat{ABC}) = 25^\circ$
 $m(\widehat{BDE}) = 110^\circ$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$

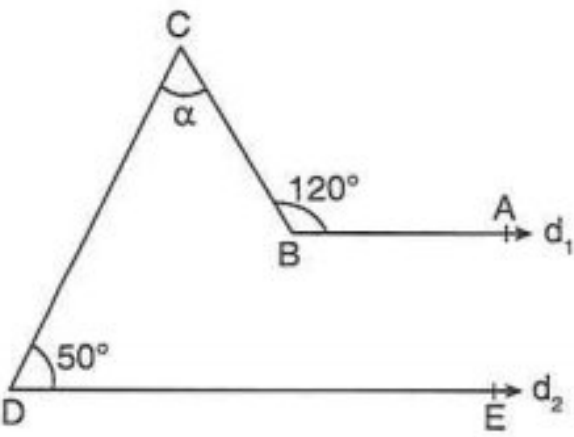
A) 65° B) 70° C) 75° D) 80° E) 85°

2.  $[BA \parallel [EF$
 $m(\widehat{BCD}) = 30^\circ$
 $m(\widehat{EDC}) = 50^\circ$
 $m(\widehat{FED}) = 110^\circ$
 $\Rightarrow m(\widehat{ABC}) = \alpha = ?$

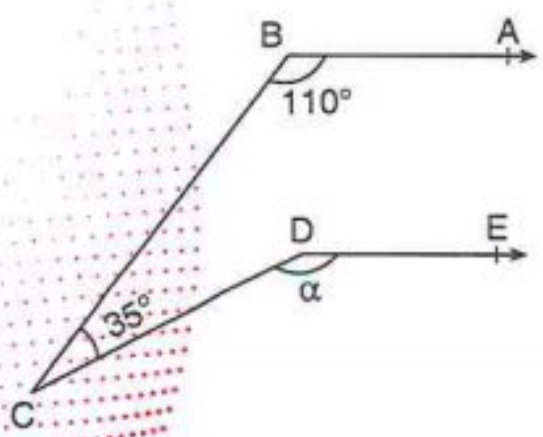
A) 120° B) 130° C) 140° D) 150° E) 160°

5.  $[BA \parallel [DF$
 $m(\widehat{ABC}) = 100^\circ$
 $m(\widehat{FDC}) = 50^\circ$
 $\Rightarrow m(\widehat{DCB}) = \alpha = ?$

A) 40° B) 50° C) 60° D) 70° E) 80°

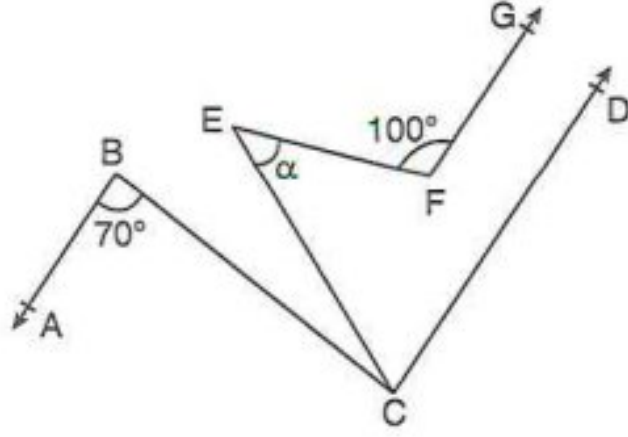
3.  $[BA \parallel [DE$
 $m(\widehat{CBA}) = 120^\circ$
 $m(\widehat{CDE}) = 50^\circ$
 $\Rightarrow m(\widehat{DCB}) = \alpha = ?$

A) 50° B) 60° C) 70° D) 80° E) 90°

6.  $[BA \parallel [DE$
 $m(\widehat{ABC}) = 110^\circ$
 $m(\widehat{BCD}) = 35^\circ$
 $\Rightarrow m(\widehat{CDE}) = \alpha = ?$

A) 115° B) 125° C) 135° D) 145° E) 155°

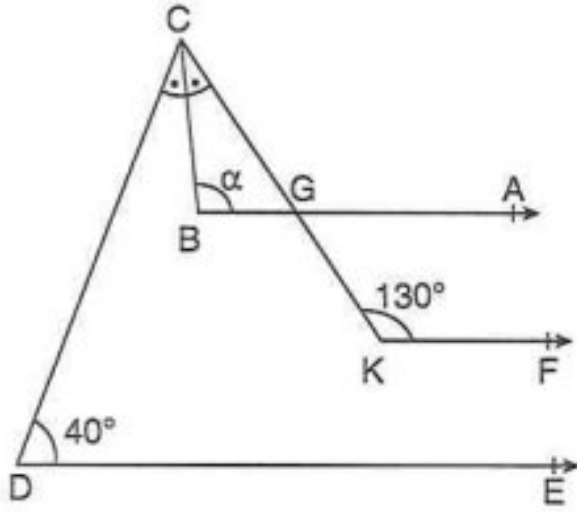
7.



[BA // [CD // [FG
 $4m(\widehat{BCE}) = 3m(\widehat{ECD})$
 $m(\widehat{ABC}) = 70^\circ$
 $m(\widehat{EFG}) = 100^\circ$
 $\Rightarrow m(\widehat{CEF}) = \alpha = ?$

- A) 15° B) 30° C) 50° D) 60° E) 80°

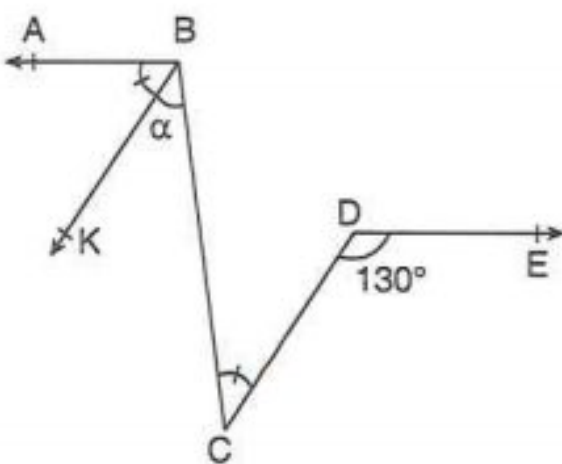
8.



[BA // [KF // [DE
 [CB] açıortay (bisector)
 $m(\widehat{CKF}) = 130^\circ$
 $m(\widehat{CDE}) = 40^\circ$
 $\Rightarrow m(\widehat{CBA}) = ?$

- A) 55° B) 60° C) 65° D) 75° E) 85°

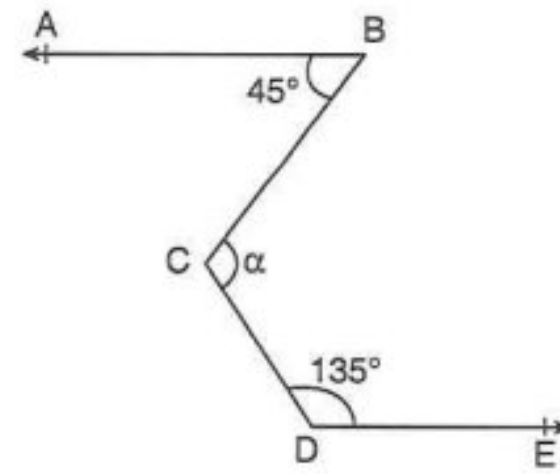
9.



[BA // [DE
 $m(\widehat{ABK}) = m(\widehat{BCD})$
 $m(\widehat{CDE}) = 130^\circ$
 $\Rightarrow m(\widehat{KBC}) = \alpha = ?$

- A) 40° B) 45° C) 50° D) 55° E) 65°

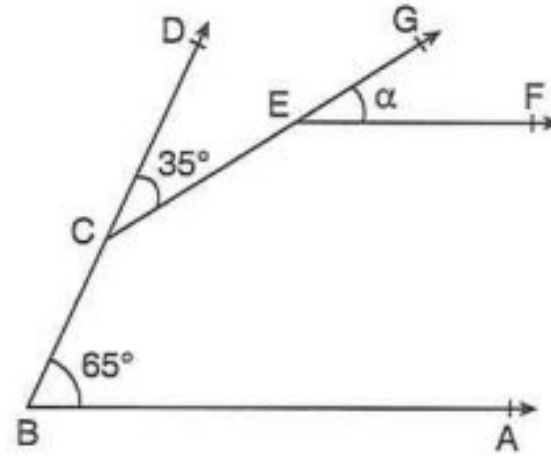
10.



[BA // [DE
 $m(\widehat{ABC}) = 45^\circ$
 $m(\widehat{CDE}) = 135^\circ$
 $\Rightarrow m(\widehat{BCD}) = \alpha = ?$

- A) 80° B) 90° C) 95° D) 100° E) 110°

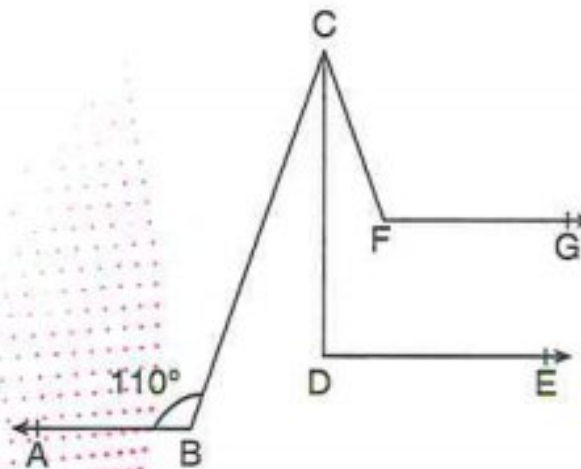
11.



[BA // [EF
 $m(\widehat{DBA}) = 65^\circ$
 $m(\widehat{DCG}) = 35^\circ$
 $\Rightarrow m(\widehat{GEF}) = ?$

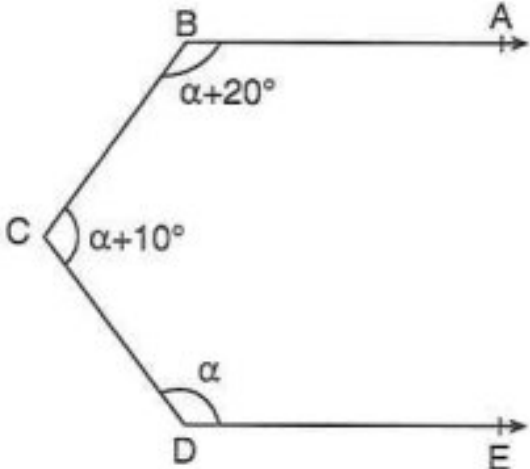
- A) 20° B) 30° C) 40° D) 50° E) 60°

12.

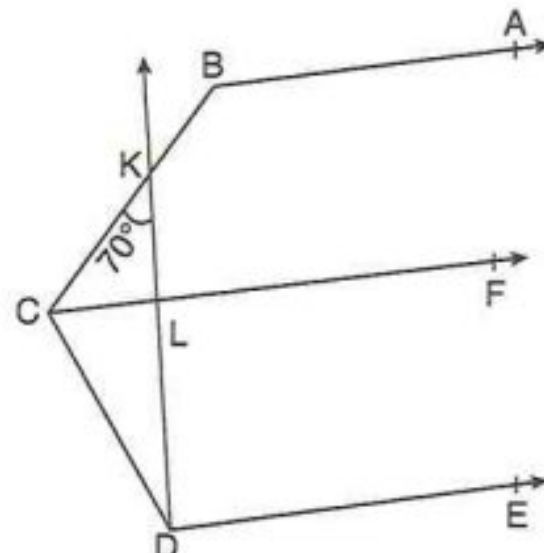


[BA // [FG // [DE
 $2m(\widehat{BCD}) = 3m(\widehat{DCF})$
 $m(\widehat{ABC}) = 110^\circ$
 $m(\widehat{CDE}) = 100^\circ$
 $\Rightarrow m(\widehat{CFG}) = ?$

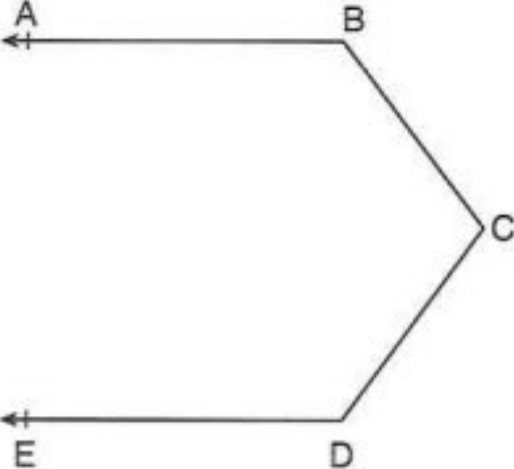
- A) 110° B) 120° C) 130° D) 140° E) 150°

1.  $[BA \parallel [DE$
 $m(\widehat{ABC}) = \alpha + 20^\circ$
 $m(\widehat{BCD}) = \alpha + 10^\circ$
 $m(\widehat{CDE}) = \alpha$
 $\Rightarrow \alpha = ?$

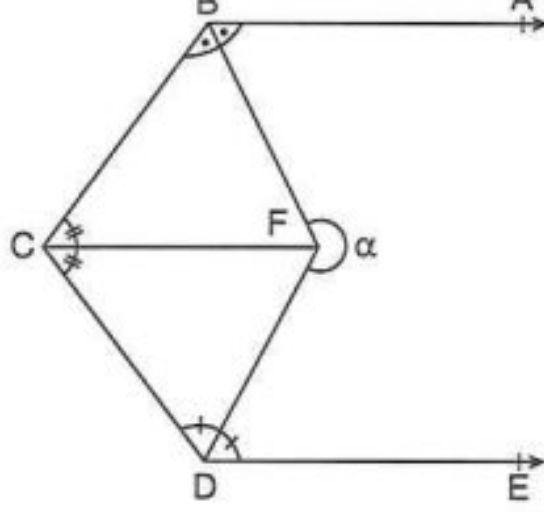
A) 110° B) 120° C) 130° D) 140° E) 150°

4.  $[BA \parallel [CF \parallel [DE$
 $2m(\widehat{BCF}) = m(\widehat{FCD})$
 $m(\widehat{CKD}) = 70^\circ$
 $m(\widehat{KLF}) = 100^\circ$
 $\Rightarrow m(\widehat{CBA}) - m(\widehat{CDE}) = ?$

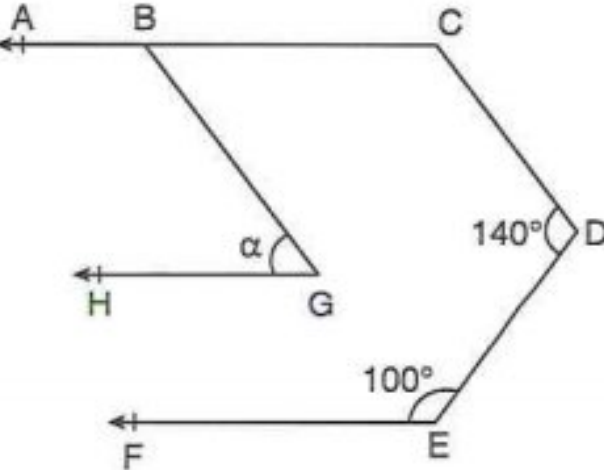
A) 10° B) 20° C) 30° D) 50° E) 55°

2.  $[BA \parallel [DE$
 $4m(\widehat{ABC}) = 3m(\widehat{BCD}) = 4m(\widehat{CDE})$
 $\Rightarrow m(\widehat{BCD}) = ?$

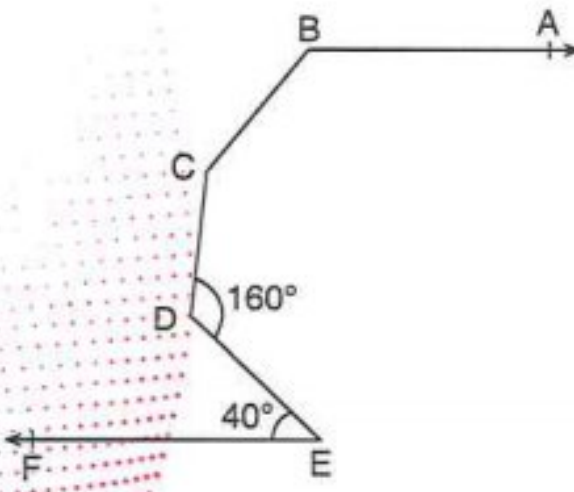
A) 36° B) 72° C) 108° D) 144° E) 168°

5.  $[BA \parallel [DE$
 $[BF], [CF], [DF]$ açıortay
(bisector)
 $m(\widehat{BCF}) = 70^\circ$
 $\Rightarrow \alpha = ?$

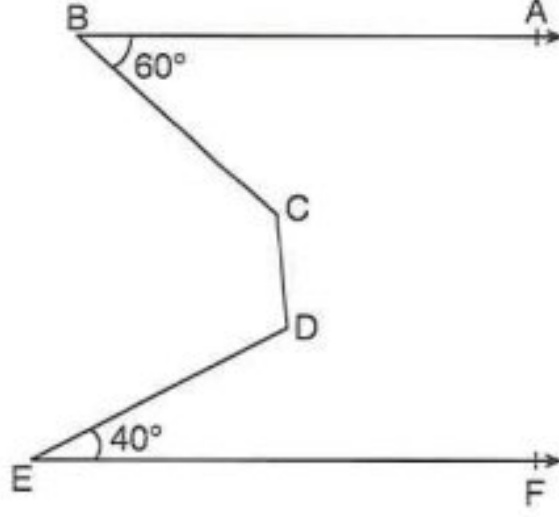
A) 200° B) 210° C) 230° D) 240° E) 250°

3.  $[CA \parallel [GH \parallel [EF$
 $[BG] \parallel [CD]$
 $m(\widehat{CDE}) = 140^\circ$
 $m(\widehat{FED}) = 100^\circ$
 $\Rightarrow m(\widehat{HGB}) = \alpha = ?$

A) 40° B) 50° C) 60° D) 70° E) 80°

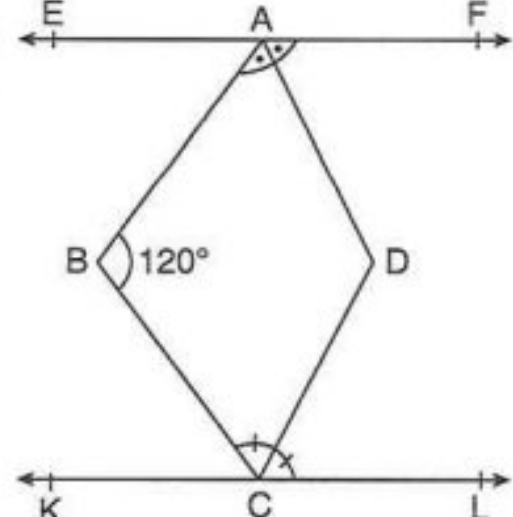
6.  $[BA \parallel [EF$
 $m(\widehat{CDE}) = 160^\circ$
 $m(\widehat{DEF}) = 40^\circ$
 $\Rightarrow m(\widehat{ABC}) = m(\widehat{BCD}) = ?$

A) 100° B) 110° C) 120° D) 130° E) 140°

7. 

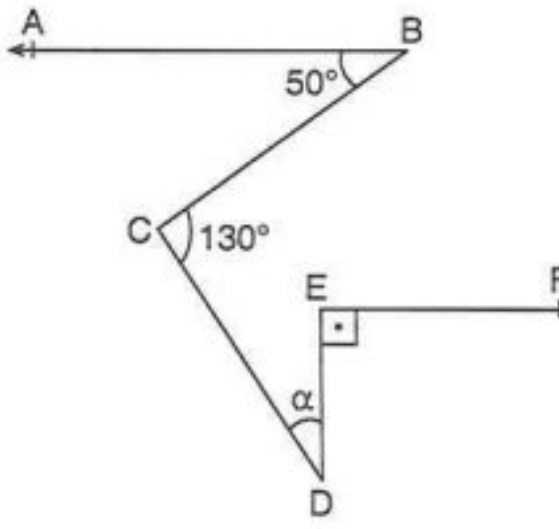
[BA // EF
 $m(\widehat{ABC}) = 60^\circ$
 $m(\widehat{DEF}) = 40^\circ$
 $3m(\widehat{BCD}) = 4m(\widehat{CDE})$
 $\Rightarrow m(\widehat{BCD}) = ?$

A) 100° B) 120° C) 130° D) 140° E) 160°

10. 

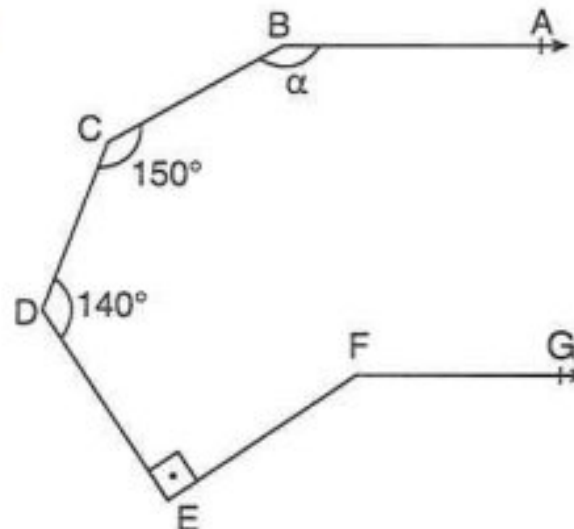
EF // KL
 $m(\widehat{BAD}) = m(\widehat{DAF})$
 $m(\widehat{BCD}) = m(\widehat{DCL})$
 $m(\widehat{ABC}) = 120^\circ$
 $\Rightarrow m(\widehat{ADC}) = ?$

A) 90° B) 100° C) 110° D) 120° E) 130°

8. 

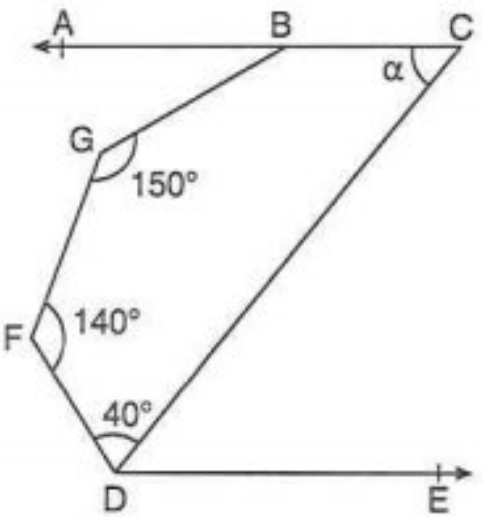
[BA // EF
 $m(\widehat{ABC}) = 50^\circ$
 $m(\widehat{BCD}) = 130^\circ$
 $m(\widehat{DEF}) = 90^\circ$
 $\Rightarrow m(\widehat{CDE}) = \alpha = ?$

A) 5° B) 10° C) 15° D) 20° E) 30°

11. 

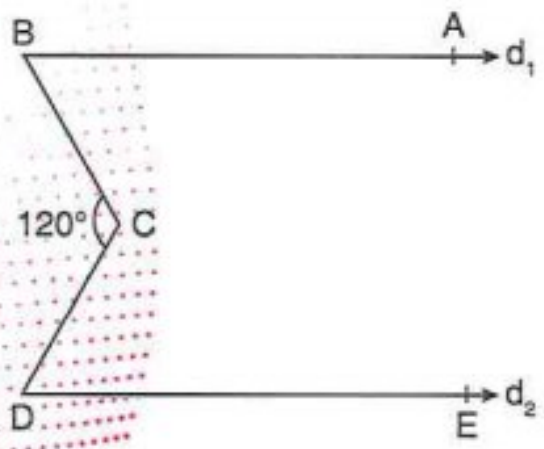
[BA // FG
[FE] \perp [DE]
 $m(\widehat{BCD}) = 150^\circ$
 $m(\widehat{CDE}) = m(\widehat{EFG}) = 140^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

A) 100° B) 120° C) 140° D) 150° E) 160°

9. 

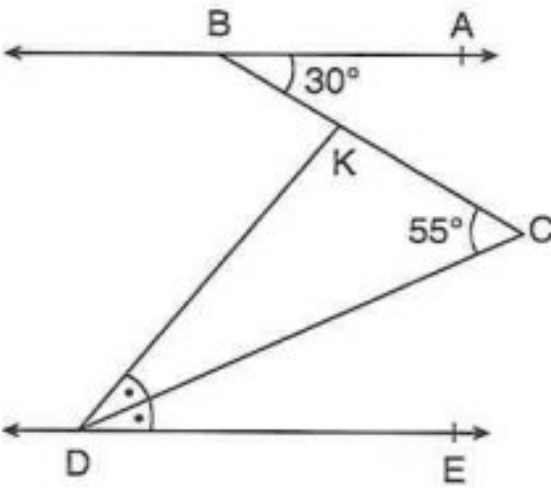
[CA // DE
 $m(\widehat{ABG}) = 30^\circ$
 $m(\widehat{BGF}) = 150^\circ$
 $m(\widehat{GFD}) = 140^\circ$
 $m(\widehat{FDC}) = 40^\circ$
 $\Rightarrow m(\widehat{ACD}) = ?$

A) 20° B) 25° C) 40° D) 45° E) 60°

12. 

[BA // DE
 $5m(\widehat{ABC}) = 7m(\widehat{CDE})$
 $m(\widehat{BCD}) = 120^\circ$
 $\Rightarrow m(\widehat{CDE}) = ?$

A) 20° B) 30° C) 40° D) 50° E) 70°

1. 

$$BA \parallel DE$$

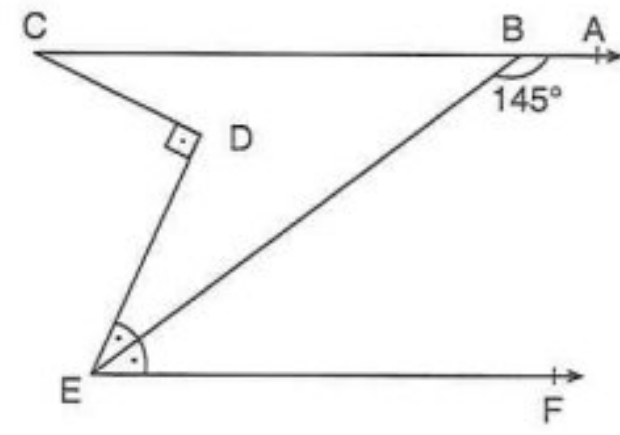
$$m(\widehat{ABC}) = 30^\circ$$

$$m(\widehat{BCD}) = 55^\circ$$

$$m(\widehat{KDC}) = m(\widehat{CDE})$$

$$\Rightarrow m(\widehat{BKD}) = ?$$

A) 60° B) 70° C) 80° D) 90° E) 100°

4. 

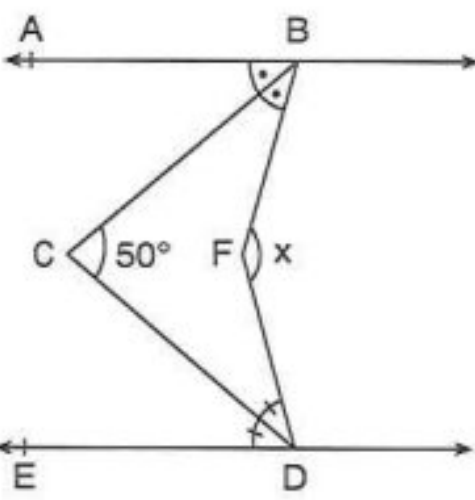
$$[CA \parallel [EF$$

$$[CD] \perp [DE]$$

$$m(\widehat{ABE}) = 145^\circ$$

$$\Rightarrow m(\widehat{ACD}) = ?$$

A) 10° B) 20° C) 30° D) 40° E) 50°

2. 

$$AB \parallel ED$$

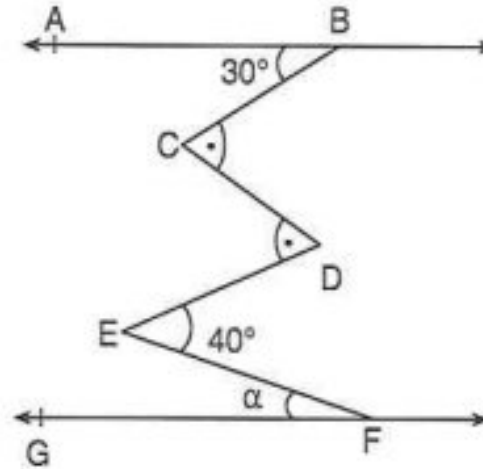
$$m(\widehat{ABC}) = m(\widehat{CBF})$$

$$m(\widehat{EDC}) = m(\widehat{CDF})$$

$$m(\widehat{BCD}) = 50^\circ$$

$$\Rightarrow m(\widehat{BFD}) = x = ?$$

A) 75° B) 90° C) 100° D) 125° E) 130°

5. 

$$AB \parallel FG$$

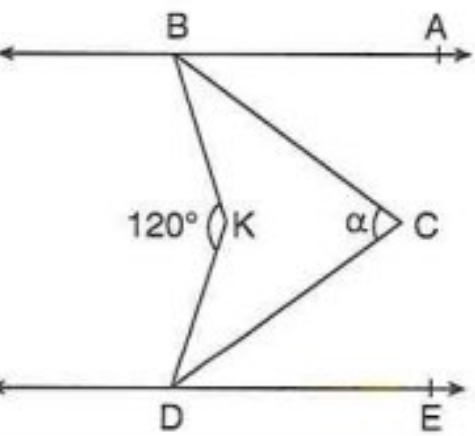
$$m(\widehat{BCD}) = m(\widehat{CDE})$$

$$m(\widehat{ABC}) = 30^\circ$$

$$m(\widehat{DEF}) = 40^\circ$$

$$\Rightarrow m(\widehat{EFG}) = \alpha = ?$$

A) 5° B) 10° C) 15° D) 20° E) 25°

3. 

$$BA \parallel DE$$

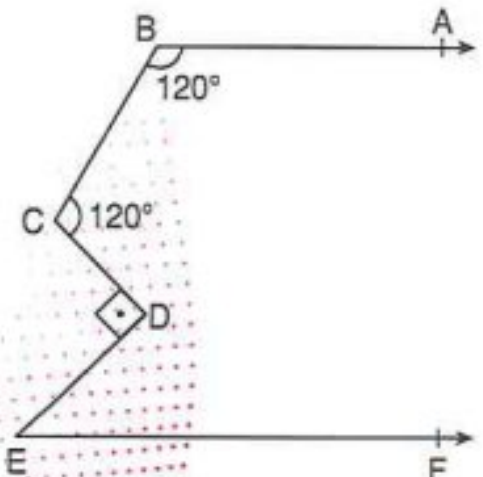
$$m(\widehat{ABC}) = 2m(\widehat{KBC})$$

$$m(\widehat{CDE}) = 2m(\widehat{KDC})$$

$$m(\widehat{BKD}) = 120^\circ$$

$$\Rightarrow m(\widehat{BCD}) = ?$$

A) 40° B) 60° C) 80° D) 100° E) 110°

6. 

$$[BA \parallel [EF$$

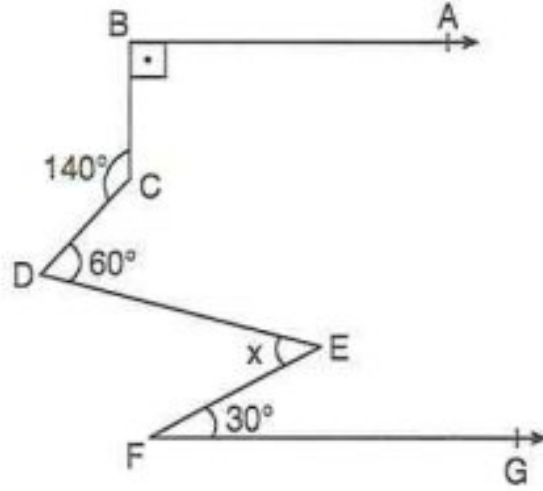
$$m(\widehat{ABC}) = m(\widehat{BCD})$$

$$[CD \perp [DE]$$

$$\Rightarrow m(\widehat{DEF}) = ?$$

A) 20° B) 30° C) 40° D) 50° E) 60°

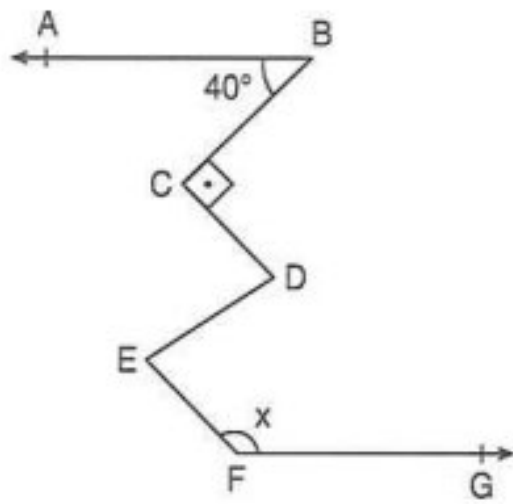
7.



[BA // [FG
 $m(\widehat{ABC}) = 90^\circ$
 $m(\widehat{BCD}) = 140^\circ$
 $m(\widehat{CDE}) = 60^\circ$
 $m(\widehat{EFG}) = 30^\circ$
 $\Rightarrow m(\widehat{DEF}) = x = ?$

- A) 30° B) 40° C) 50° D) 60° E) 70°

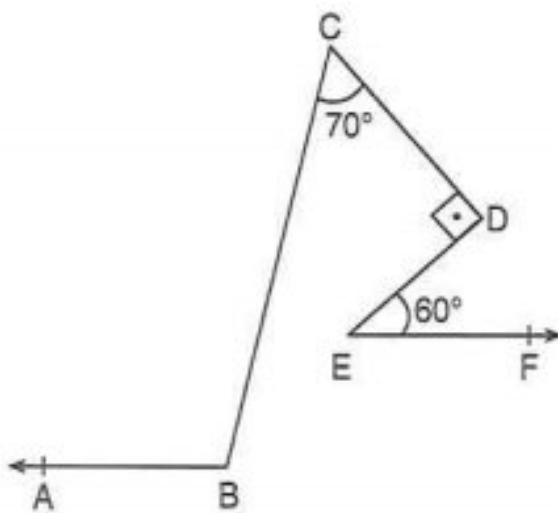
8.



[BA // [FG
 [CD] // [EF]
 [BC] \perp [CD]
 $m(\widehat{ABC}) = 40^\circ$
 $\Rightarrow m(\widehat{EFG}) = x = ?$

- A) 100° B) 110° C) 115° D) 120° E) 130°

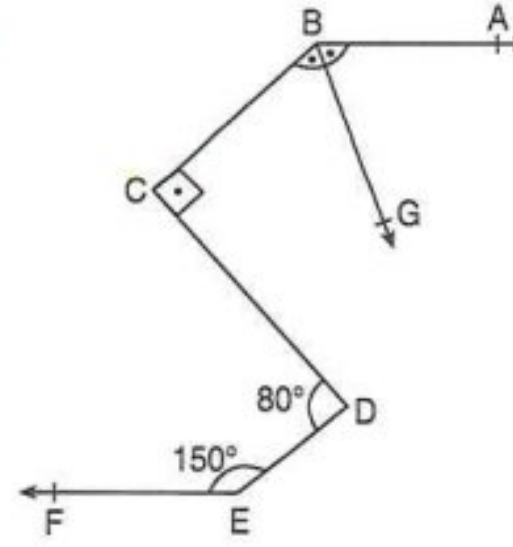
9.



[BA // [EF
 [CD] \perp [DE]
 $m(\widehat{BCD}) = 70^\circ$
 $m(\widehat{DEF}) = 60^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

- A) 90° B) 100° C) 105° D) 120° E) 140°

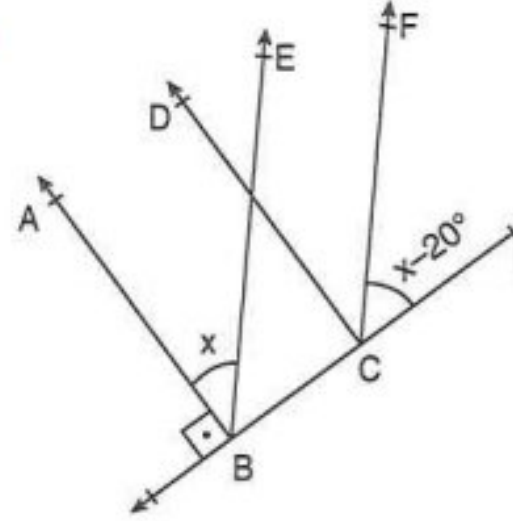
10.



[BA // [EF
 [BC] \perp [CD]
 $m(\widehat{CDE}) = 80^\circ$
 $m(\widehat{DEF}) = 150^\circ$
 $\Rightarrow m(\widehat{CBG}) = m(\widehat{GBA}) = ?$

- A) 60° B) 65° C) 70° D) 75° E) 80°

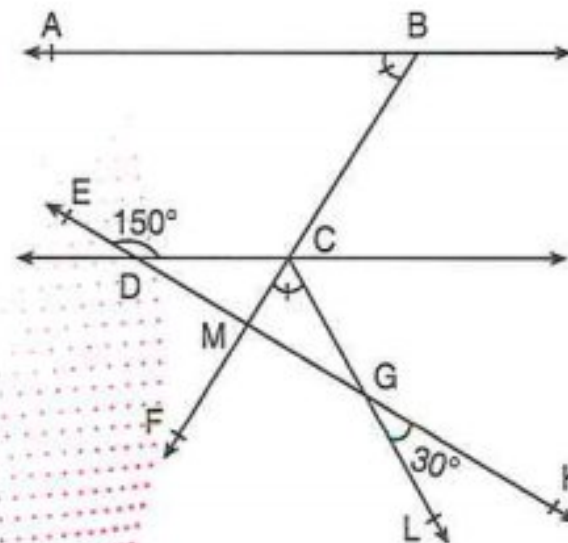
11.



[BA // [CD
 [BE] // [CF]
 [BA] \perp [BG]
 $m(\widehat{ABE}) = x$
 $m(\widehat{FCG}) = x - 20^\circ$
 $\Rightarrow x = ?$

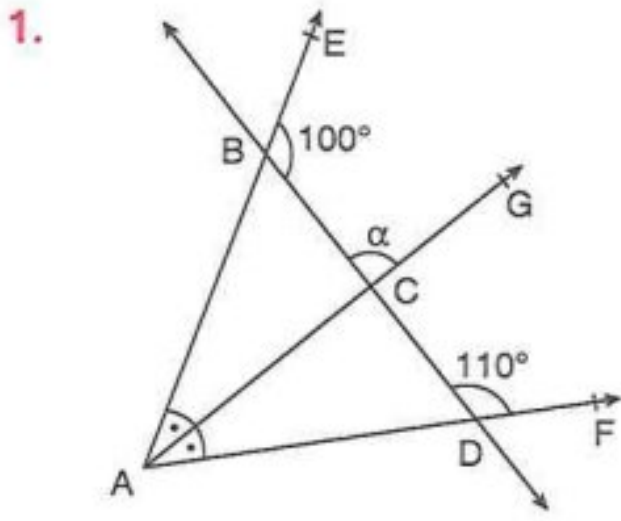
- A) 35° B) 45° C) 55° D) 65° E) 75°

12.



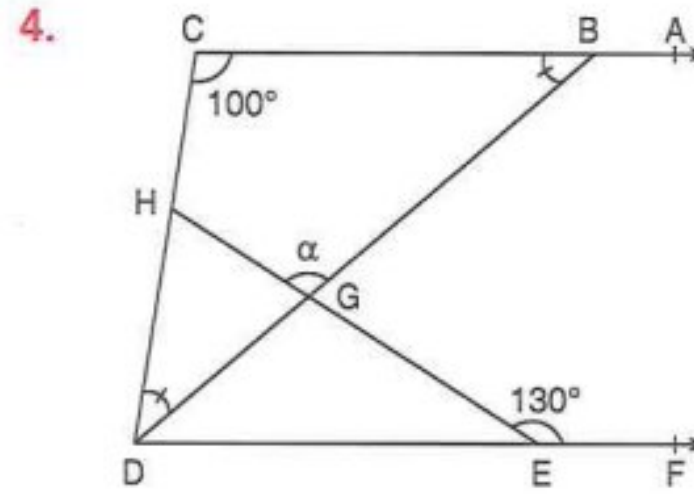
AB // DC
 $m(\widehat{ABF}) = m(\widehat{FCL})$
 $m(\widehat{EDC}) = 150^\circ$
 $m(\widehat{LGK}) = 30^\circ$
 $\Rightarrow m(\widehat{FMK}) = ?$

- A) 80° B) 90° C) 100° D) 110° E) 120°



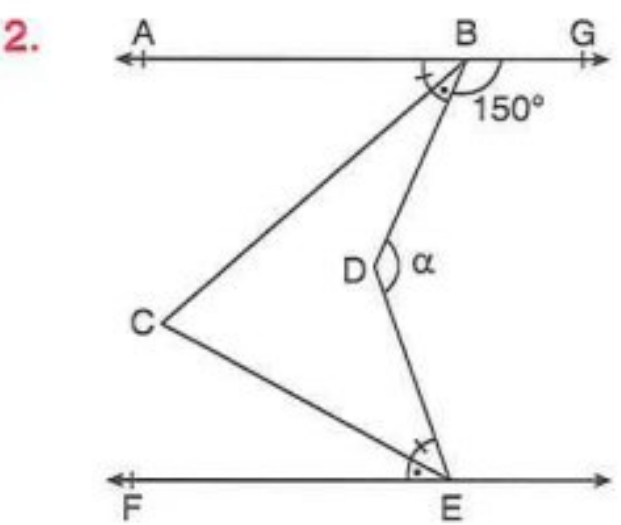
$m(\widehat{EAG}) = m(\widehat{GAF})$
 $m(\widehat{EBD}) = 100^\circ$
 $m(\widehat{BDF}) = 110^\circ$
 $\Rightarrow m(\widehat{BCG}) = \alpha = ?$

- A) 80° B) 90° C) 95° D) 100° E) 105°



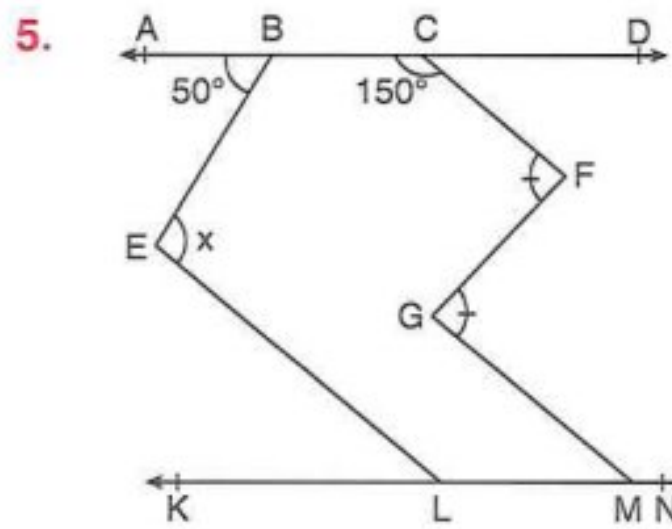
$[CA \parallel DF]$
 $m(\widehat{CBD}) = m(\widehat{CDB})$
 $m(\widehat{ACD}) = 100^\circ$
 $m(\widehat{HEF}) = 130^\circ$
 $\Rightarrow m(\widehat{HGB}) = \alpha = ?$

- A) 50° B) 60° C) 70° D) 80° E) 90°



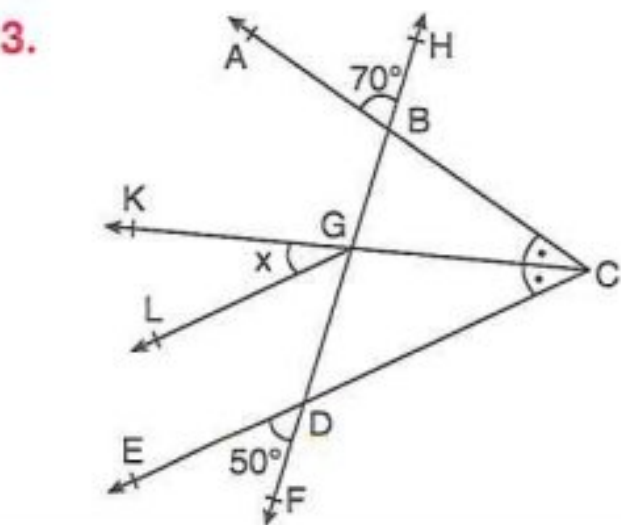
$AG \parallel EF$
 $m(\widehat{ABC}) = m(\widehat{DEC})$
 $m(\widehat{CBD}) = m(\widehat{CEF})$
 $m(\widehat{DBG}) = 150^\circ$
 $\Rightarrow m(\widehat{BDE}) = \alpha = ?$

- A) 30° B) 40° C) 60° D) 75° E) 80°



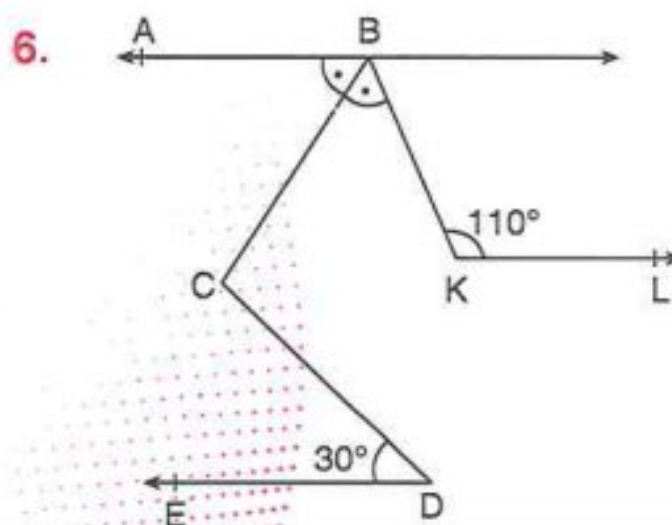
$AD \parallel KN$
 $[EL] \parallel [GM]$
 $m(\widehat{CFG}) = m(\widehat{FGM})$
 $m(\widehat{ABE}) = 50^\circ$
 $m(\widehat{ACF}) = 150^\circ$
 $\Rightarrow m(\widehat{BEL}) = x = ?$

- A) 70° B) 75° C) 80° D) 85° E) 90°



$[GL \parallel CE]$
 $m(\widehat{ACK}) = m(\widehat{KCE})$
 $m(\widehat{ABH}) = 70^\circ$
 $m(\widehat{EDF}) = 50^\circ$
 $\Rightarrow m(\widehat{LGK}) = x = ?$

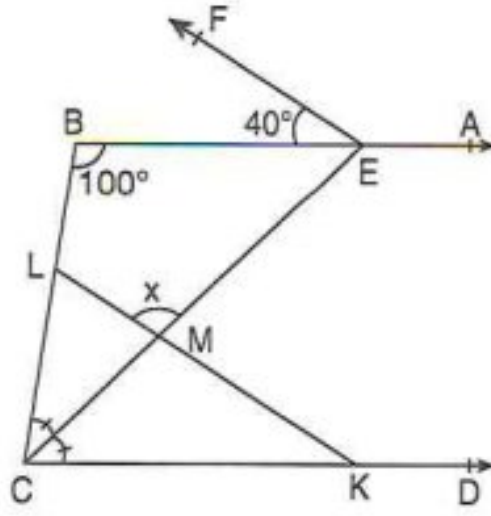
- A) 10° B) 20° C) 30° D) 40° E) 50°



$[BA \parallel KL \parallel DE]$
 $m(\widehat{ABC}) = m(\widehat{CBK})$
 $m(\widehat{BKL}) = 110^\circ$
 $m(\widehat{EDC}) = 30^\circ$
 $\Rightarrow m(\widehat{BCD}) = ?$

- A) 50° B) 65° C) 85° D) 90° E) 100°

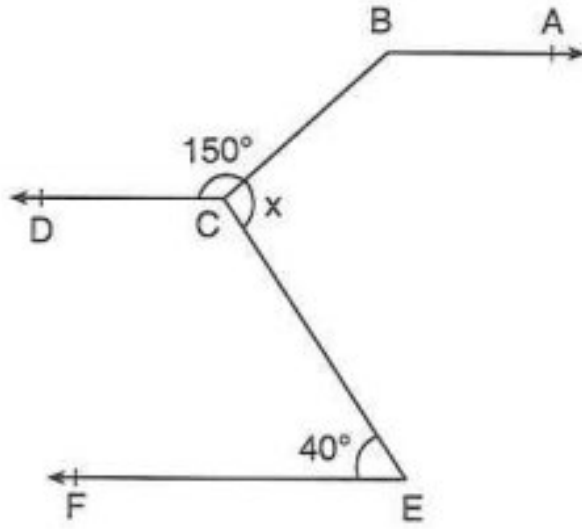
7.



[BA // [CD
[EF // [KL
[CE] açıortay (bisector)
 $m(\widehat{ABC}) = 100^\circ$
 $m(\widehat{FEB}) = 40^\circ$
 $\Rightarrow m(\widehat{LME}) = x = ?$

- A) 70° B) 80° C) 90° D) 100° E) 110°

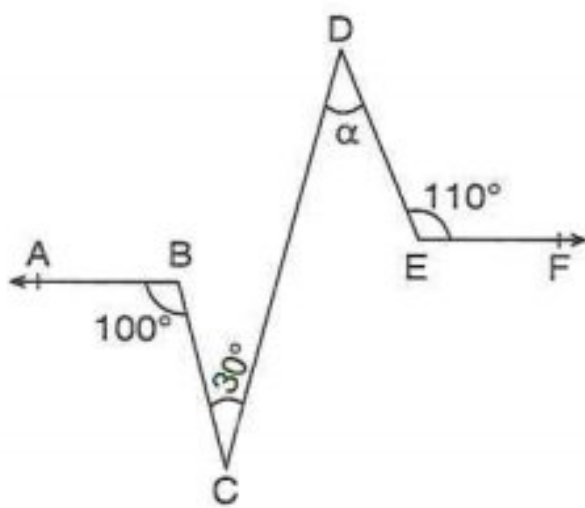
8.



[BA // [CD // [EF
 $m(\widehat{BCD}) = 150^\circ$
 $m(\widehat{FEC}) = 40^\circ$
 $\Rightarrow m(\widehat{ECB}) = x = ?$

- A) 30° B) 50° C) 70° D) 90° E) 100°

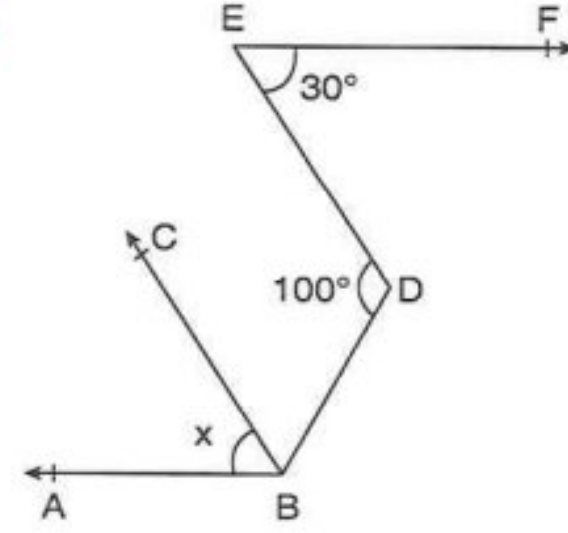
9.



[BA // [EF
 $m(\widehat{ABC}) = 100^\circ$
 $m(\widehat{BCD}) = 30^\circ$
 $m(\widehat{DEF}) = 110^\circ$
 $\Rightarrow m(\widehat{CDE}) = \alpha = ?$

- A) 40° B) 50° C) 60° D) 70° E) 80°

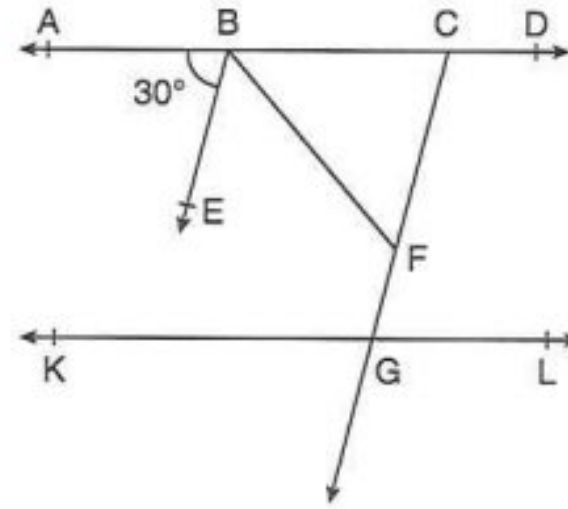
10.



[BA // [EF
[BC // [DE]
 $m(\widehat{FED}) = 30^\circ$
 $m(\widehat{EDB}) = 100^\circ$
 $\Rightarrow m(\widehat{ABC}) = x = ?$

- A) 30° B) 50° C) 65° D) 70° E) 80°

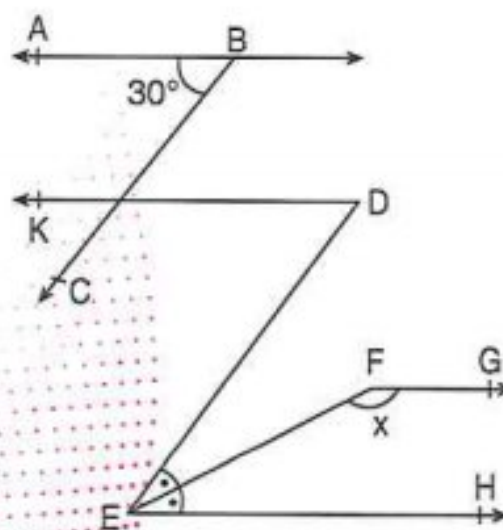
11.



AD // KL
[BE // [CG
 $m(\widehat{ABE}) = 30^\circ$
 $\Rightarrow m(\widehat{CGL}) = ?$

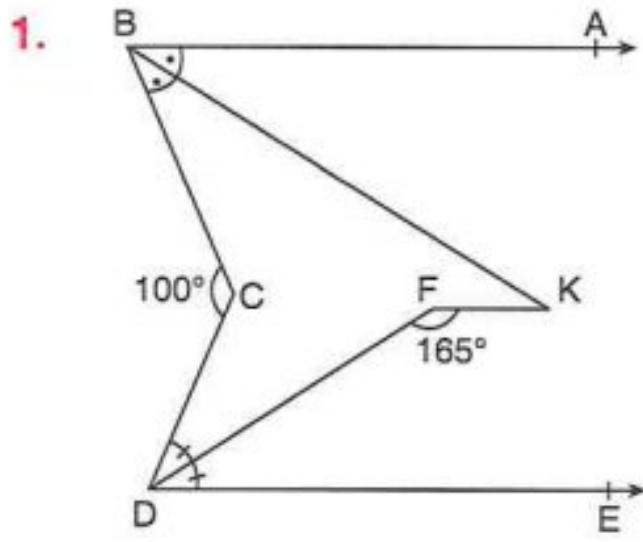
- A) 15° B) 30° C) 45° D) 50° E) 60°

12.



[BA // [DK // [FG // [EH
[BC // [DE]
 $m(\widehat{DEF}) = m(\widehat{FEH})$
 $m(\widehat{ABC}) = 30^\circ$
 $\Rightarrow m(\widehat{EFG}) = x = ?$

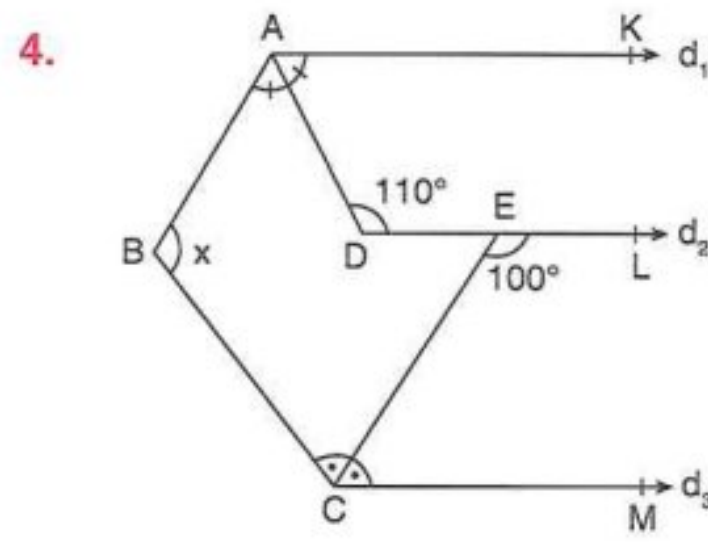
- A) 120° B) 125° C) 135° D) 145° E) 165°



[BA // FK] // [DE
 $m(\widehat{ABK}) = m(\widehat{KBC})$
 $m(\widehat{CDF}) = m(\widehat{FDE})$
 $m(\widehat{BCD}) = 110^\circ$
 $m(\widehat{KFD}) = 165^\circ$

$\Rightarrow m(\widehat{BKF}) = ?$

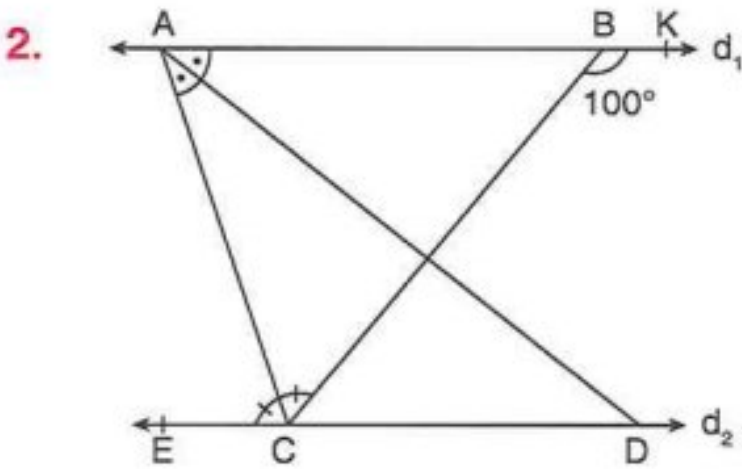
- A) 25° B) 30° C) 35° D) 40° E) 45°



$d_1 // d_2 // d_3$
 $m(\widehat{KAD}) = m(\widehat{DAB})$
 $m(\widehat{BCE}) = m(\widehat{ECM})$
 $m(\widehat{ADL}) = 110^\circ$
 $m(\widehat{CEL}) = 100^\circ$

$\Rightarrow m(\widehat{ABC}) = x = ?$

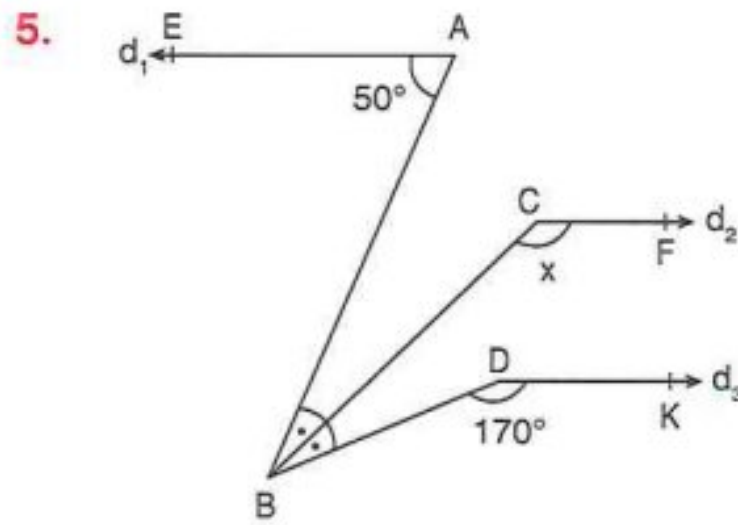
- A) 50° B) 60° C) 70° D) 80° E) 90°



$d_1 // d_2$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $m(\widehat{ECA}) = m(\widehat{ACB})$
 $m(\widehat{KBC}) = 100^\circ$

$\Rightarrow m(\widehat{ADE}) = ?$

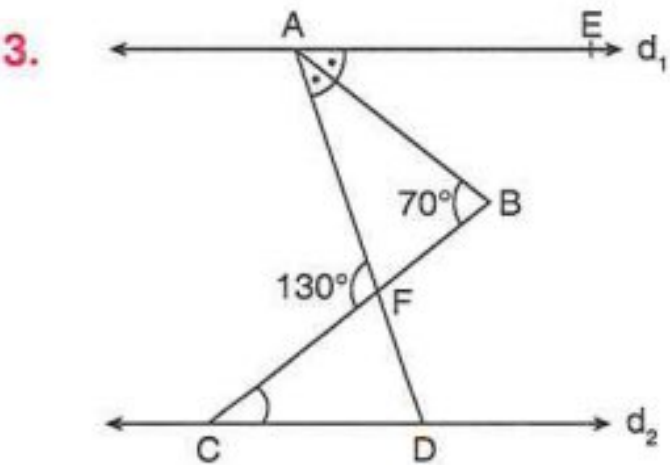
- A) 35° B) 30° C) 25° D) 20° E) 15°



$d_1 // d_2 // d_3$
 $m(\widehat{ABC}) = m(\widehat{CBD})$
 $m(\widehat{EAB}) = 50^\circ$
 $m(\widehat{BDK}) = 170^\circ$

$\Rightarrow m(\widehat{BCF}) = x = ?$

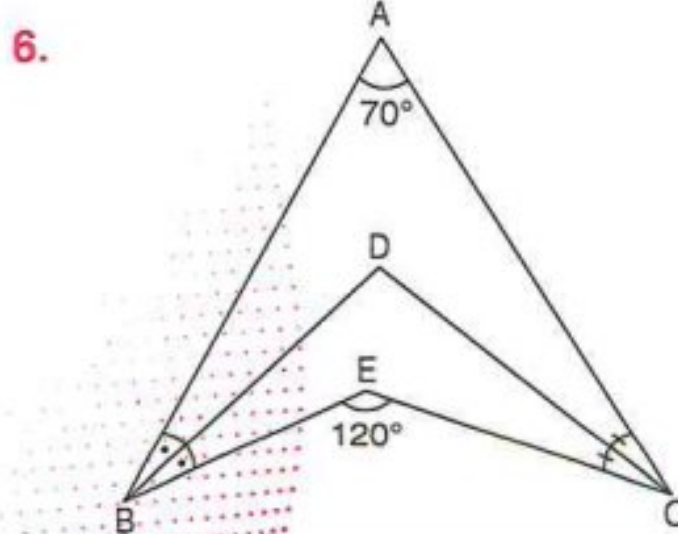
- A) 120° B) 130° C) 140° D) 150° E) 160°



$d_1 // d_2$
 $m(\widehat{EAB}) = m(\widehat{BAD})$
 $m(\widehat{ABC}) = 70^\circ$
 $m(\widehat{AFC}) = 130^\circ$

$\Rightarrow m(\widehat{BCD}) = x = ?$

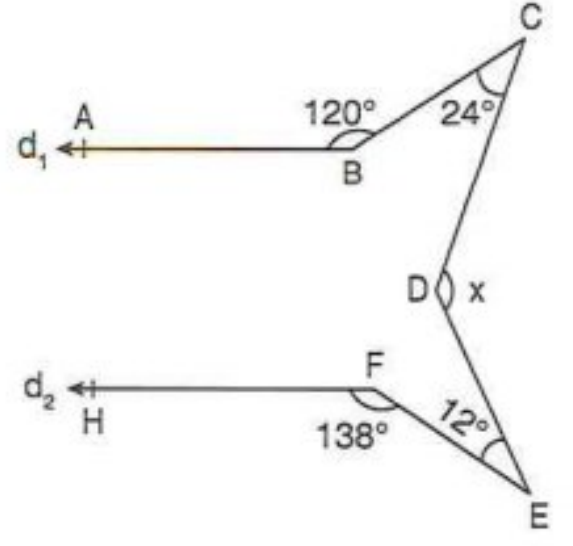
- A) 10° B) 15° C) 20° D) 25° E) 30°



$m(\widehat{ABD}) = m(\widehat{DBE})$
 $m(\widehat{ACD}) = m(\widehat{DCE})$
 $m(\widehat{BAC}) = 70^\circ$
 $m(\widehat{BEC}) = 120^\circ$

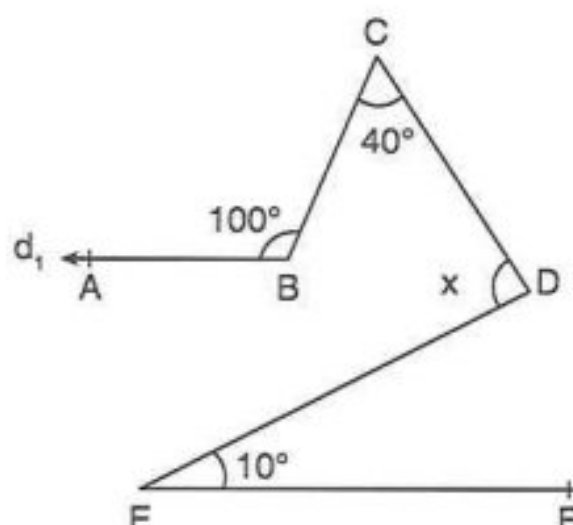
$\Rightarrow m(\widehat{BDC}) = ?$

- A) 75° B) 80° C) 85° D) 90° E) 95°

7. 

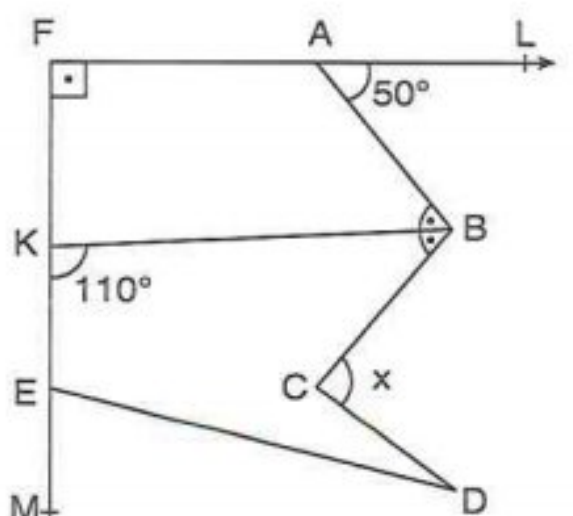
$d_1 \parallel d_2$
 $m(\widehat{ABC}) = 120^\circ$
 $m(\widehat{BCD}) = 24^\circ$
 $m(\widehat{DEF}) = 12^\circ$
 $m(\widehat{EFH}) = 138^\circ$
 $\Rightarrow m(\widehat{CDE}) = x = ?$

A) 146° B) 144° C) 141° D) 140° E) 138°

8. 

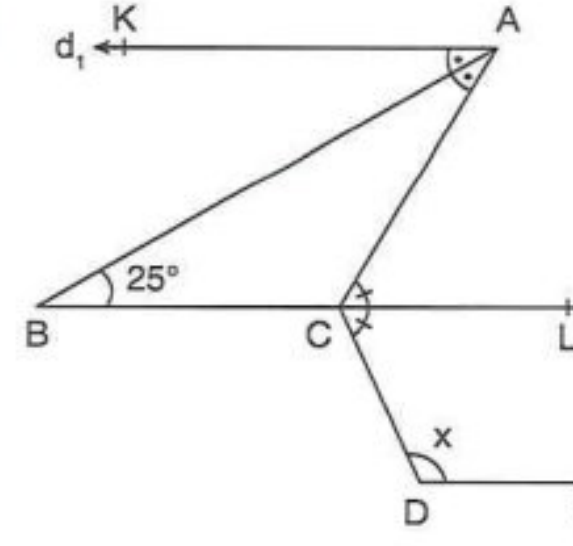
$d_1 \parallel d_2$
 $m(\widehat{ABC}) = 100^\circ$
 $m(\widehat{BCD}) = 40^\circ$
 $m(\widehat{DEF}) = 10^\circ$
 $\Rightarrow m(\widehat{CDE}) = x = ?$

A) 60° B) 70° C) 80° D) 90° E) 100°

9. 

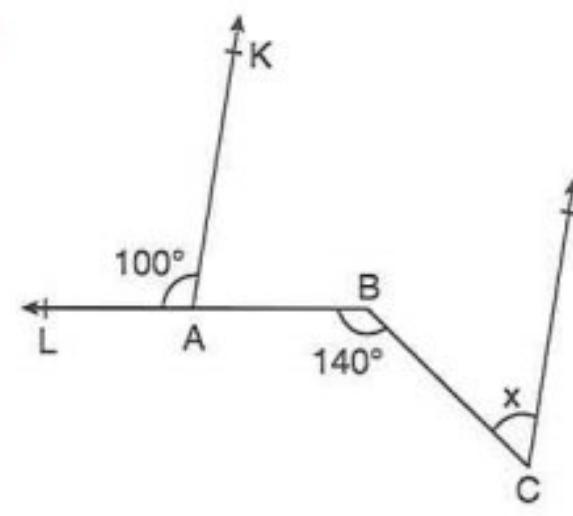
$m(\widehat{ABK}) = m(\widehat{KBC})$
 $[FL \perp FM]$
 $m(\widehat{BAL}) = 50^\circ$
 $m(\widehat{BKM}) = 110^\circ$
 $m(\widehat{MED}) = 70^\circ$
 $m(\widehat{CDE}) = 20^\circ$
 $\Rightarrow m(\widehat{BCD}) = ?$

A) 110° B) 120° C) 130° D) 140° E) 150°

10. 

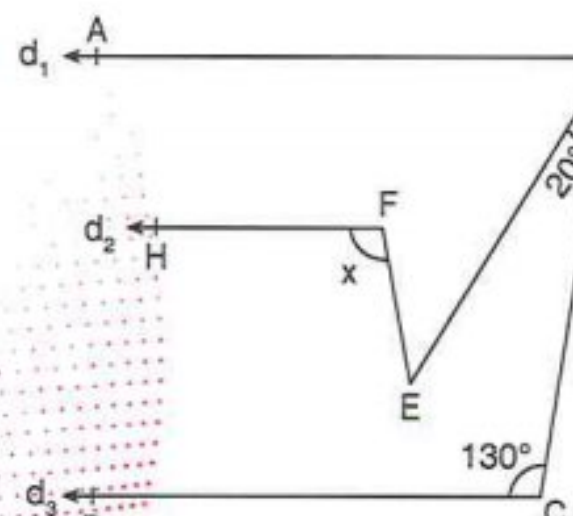
$d_1 \parallel d_2 \parallel d_3$
 $m(\widehat{KAB}) = m(\widehat{BAC})$
 $m(\widehat{ACL}) = m(\widehat{LCD})$
 $m(\widehat{ABC}) = 25^\circ$
 $\Rightarrow m(\widehat{CDM}) = x = ?$

A) 130° B) 135° C) 140° D) 150° E) 155°

11. 

$[AK \parallel [CD$
 $m(\widehat{LAK}) = 100^\circ$
 $m(\widehat{LBC}) = 140^\circ$
 $\Rightarrow m(\widehat{BCD}) = x = ?$

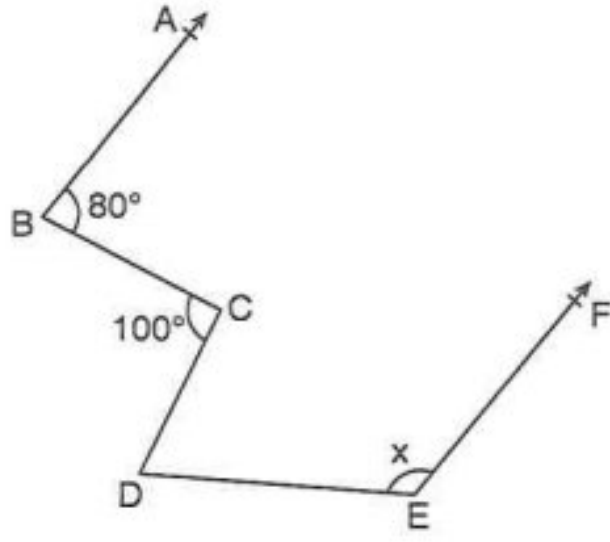
A) 40° B) 50° C) 60° D) 70° E) 80°

12. 

$d_1 \parallel d_2 \parallel d_3$
 $m(\widehat{FEB}) = 40^\circ$
 $m(\widehat{EBC}) = 20^\circ$
 $m(\widehat{BCD}) = 130^\circ$
 $\Rightarrow m(\widehat{HFE}) = x = ?$

A) 70° B) 80° C) 90° D) 100° E) 110°

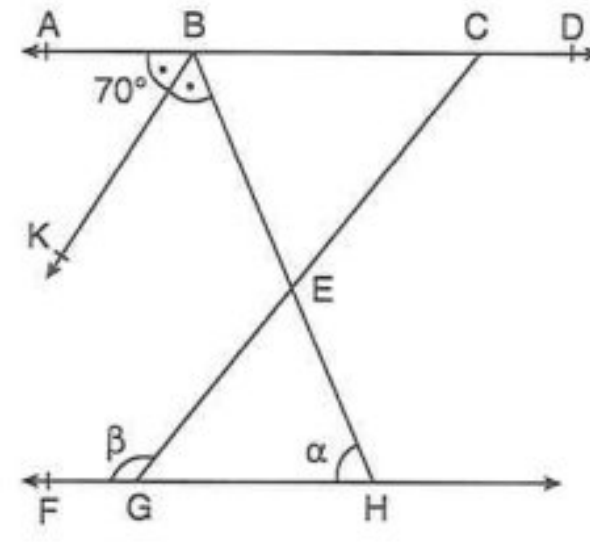
1.



[BA // [EF
 $m(\widehat{ABC}) = 80^\circ$
 $m(\widehat{BCD}) = 100^\circ$
 $m(\widehat{CDE}) = 50^\circ$
 $m(\widehat{DEF}) = x$
 $\Rightarrow m(\widehat{DEF}) = x = ?$

- A) 160° B) 150° C) 140° D) 130° E) 120°

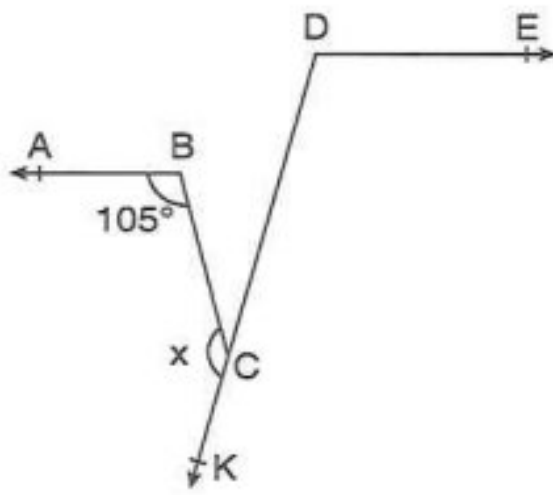
4.



AD // FH
 [GC] \perp [BH]
 $m(\widehat{ABK}) = m(\widehat{KBH}) = 70^\circ$
 $m(\widehat{BHF}) = \alpha$
 $m(\widehat{FGC}) = \beta$
 $\Rightarrow \alpha + \beta = ?$

- A) 150° B) 155° C) 160° D) 165° E) 170°

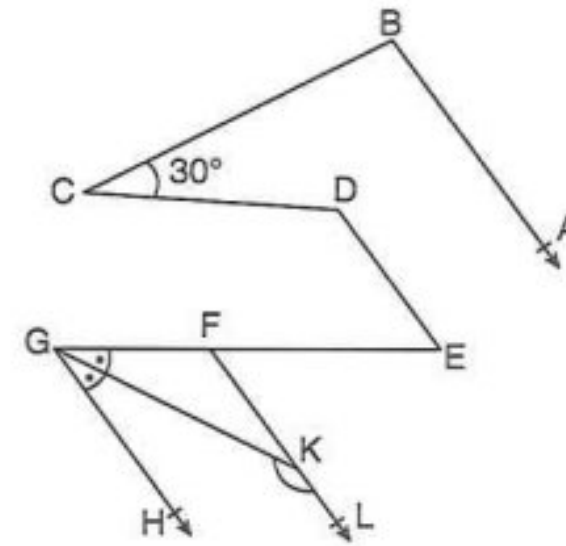
2.



[BA // [DE
 $m(\widehat{ABC}) = 105^\circ$
 $m(\widehat{KDE}) = 120^\circ$
 $\Rightarrow m(\widehat{BCK}) = x = ?$

- A) 120° B) 125° C) 130° D) 135° E) 140°

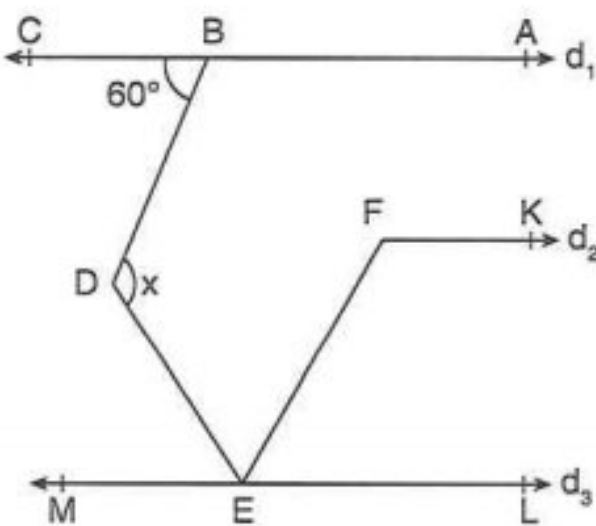
5.



[BA // [DE] // [FL // [GH
 $m(\widehat{EGK}) = m(\widehat{HGK})$
 $m(\widehat{BCD}) = 30^\circ$
 $m(\widehat{GKF}) = 20^\circ$
 $\Rightarrow m(\widehat{ABC}) = ?$

- A) 100° B) 110° C) 115° D) 120° E) 135°

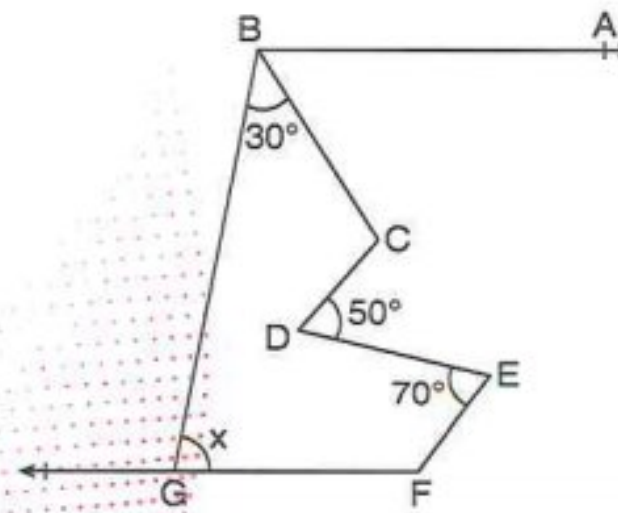
3.



$d_1 // d_2 // d_3$
 $m(\widehat{DEF}) = m(\widehat{FEL})$
 $m(\widehat{CBD}) = 60^\circ$
 $m(\widehat{EFK}) = 110^\circ$
 $\Rightarrow m(\widehat{BDE}) = ?$

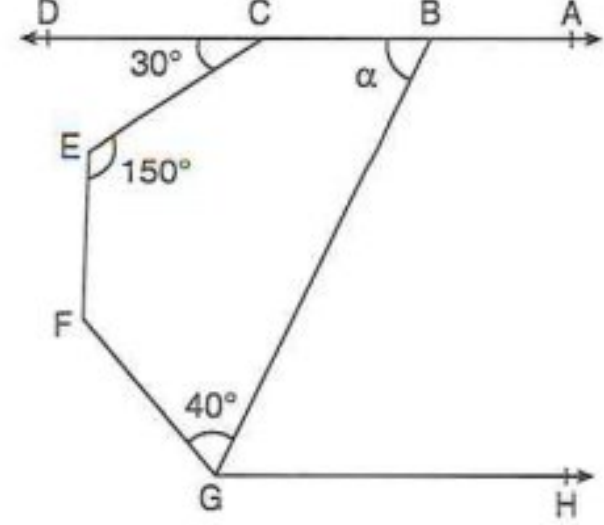
- A) 95° B) 100° C) 110° D) 115° E) 120°

6.



[BA // [FG
 $m(\widehat{GBC}) = 30^\circ$
 $m(\widehat{BCD}) = 80^\circ$
 $m(\widehat{CDE}) = 50^\circ$
 $m(\widehat{DEF}) = 70^\circ$
 $m(\widehat{EFG}) = 150^\circ$
 $\Rightarrow m(\widehat{BGF}) = x = ?$

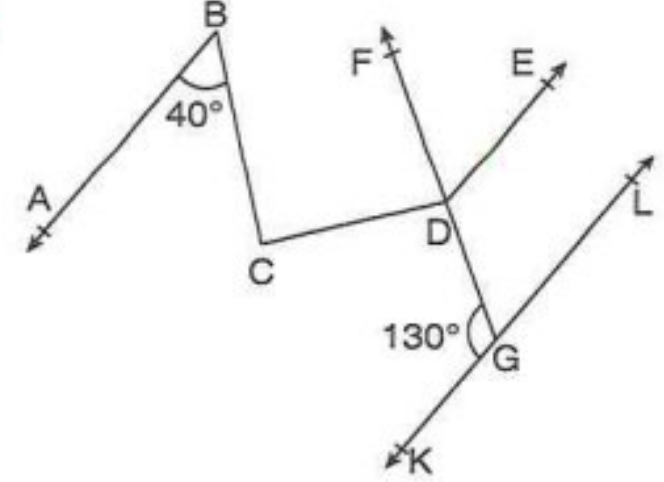
- A) 45° B) 60° C) 65° D) 70° E) 80°

7. 

$AD \parallel GH$
 $m(\widehat{DCE}) = 30^\circ$
 $m(\widehat{CEF}) = 150^\circ$
 $m(\widehat{FEG}) = 140^\circ$
 $m(\widehat{FGB}) = 40^\circ$

$\Rightarrow m(\widehat{DBG}) = \alpha = ?$

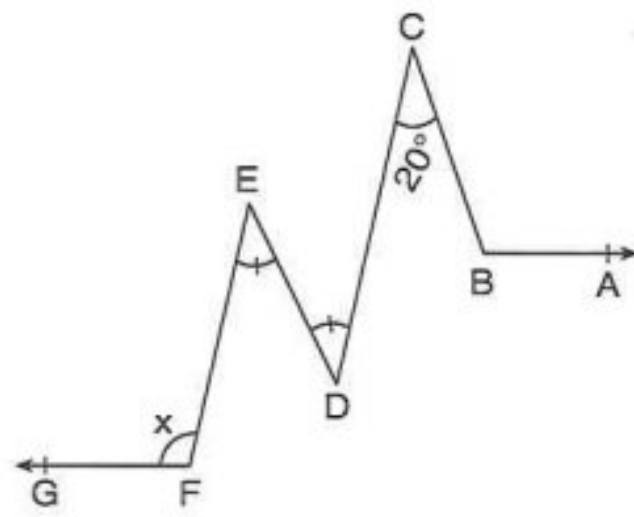
A) 40° B) 45° C) 60° D) 70° E) 75°

10. 

$[BA \parallel DE \parallel KL$
 $m(\widehat{ABC}) = 40^\circ$
 $m(\widehat{BCD}) = 100^\circ$
 $m(\widehat{KGF}) = 130^\circ$

$\Rightarrow m(\widehat{CDF}) = ?$

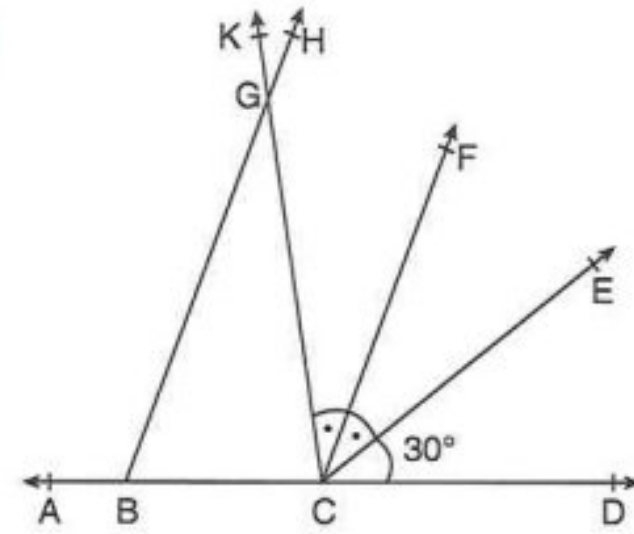
A) 50° B) 60° C) 70° D) 80° E) 90°

8. 

$[BA \parallel FG$
 $m(\widehat{FED}) = m(\widehat{EDC})$
 $m(\widehat{CBA}) = 110^\circ$
 $m(\widehat{DCB}) = 20^\circ$

$\Rightarrow m(\widehat{GFE}) = x = ?$

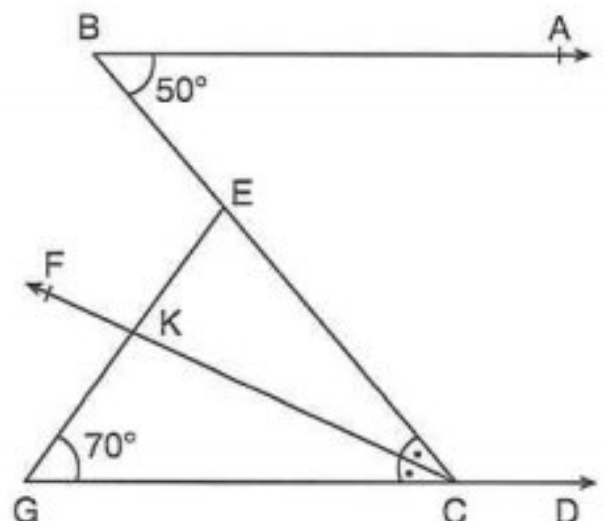
A) 70° B) 90° C) 110° D) 130° E) 150°

11. 

$[BH \parallel CF$
 $m(\widehat{KCF}) = m(\widehat{FCE})$
 $m(\widehat{ECD}) = 30^\circ$
 $m(\widehat{ABH}) = 100^\circ$

$\Rightarrow m(\widehat{KGH}) = ?$

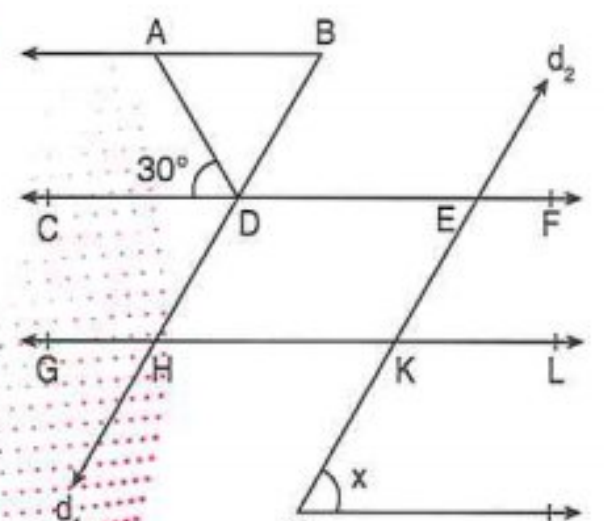
A) 40° B) 50° C) 60° D) 70° E) 80°

9. 

$[BA \parallel GD$
 $m(\widehat{BCF}) = m(\widehat{FCG})$
 $m(\widehat{ABC}) = 50^\circ$
 $m(\widehat{EGD}) = 70^\circ$

$\Rightarrow m(\widehat{FKE}) = ?$

A) 60° B) 75° C) 80° D) 85° E) 90°

12. 

$d_1 \parallel d_2$
 $[BA \parallel CF \parallel GL \parallel MN$
 $|ABI| = |ADI|$
 $m(\widehat{ADC}) = 30^\circ$

$\Rightarrow m(\widehat{EMN}) = x = ?$

A) 60° B) 75° C) 80° D) 85° E) 90°



ÜÇGENDE AÇI ANGLES OF TRIANGLE

**KONU
KAVRAMA
TESTİ**
*Thread Grip
Test*

**ZİHİN
HARİTASI**
Mind Map

**8
TEST**
Tests

**156
SORU**
Questions

ÜÇGENDE AÇI ANGLES OF TRIANGLE

1.

$a + b + c = 180^\circ$ $x + y + z = 360^\circ$

5.

2.

6.

3.

$x = 90^\circ + \frac{m(\widehat{A})}{2}$

7.

$|AB| = |AC|$ $|AB| = |AC| = |BC|$
 $m(\widehat{B}) = m(\widehat{C})$ $m(\widehat{A}) = m(\widehat{B}) = m(\widehat{C})$

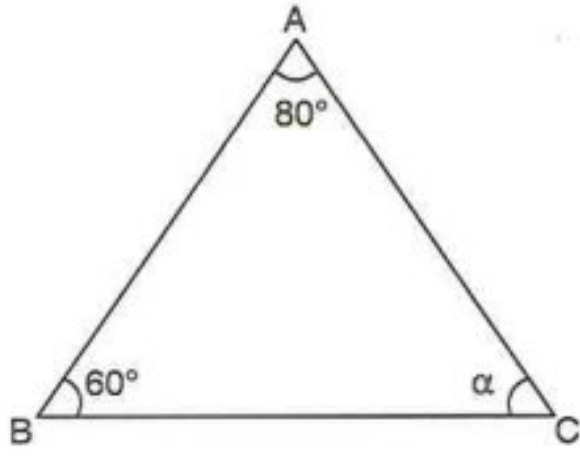
4.

$x = 90^\circ - \frac{m(\widehat{A})}{2}$

8.

$m(\widehat{A}) = 90^\circ$ $|AD| = |BD| = |DC|$

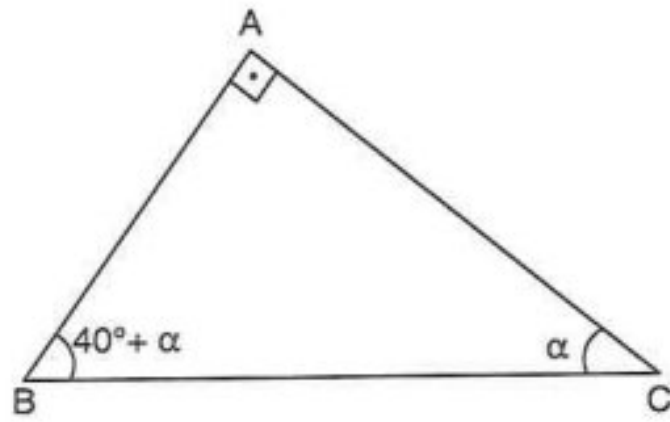
1.



$m(\widehat{BAC}) = 80^\circ$
 $m(\widehat{ABC}) = 60^\circ$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$

- A) 30° B) 40° C) 50° D) 60° E) 70°

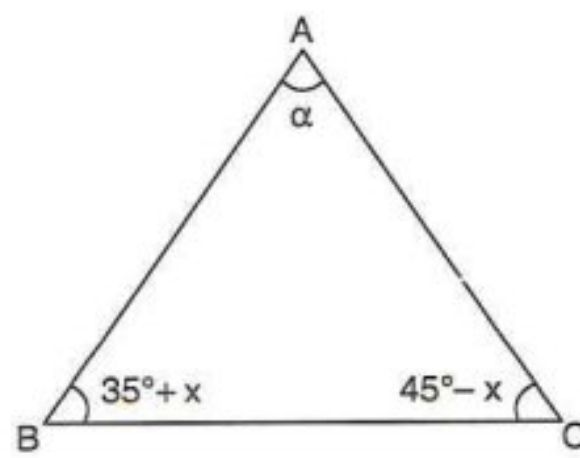
2.



$[BA] \perp [AC]$
 $m(\widehat{CBA}) = 40 + \alpha$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$

- A) 20° B) 25° C) 30° D) 35° E) 45°

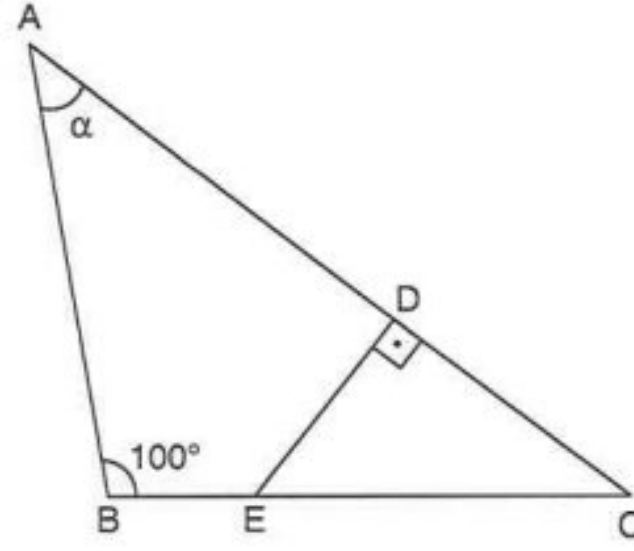
3.



$m(\widehat{ABC}) = 35^\circ + x$
 $m(\widehat{ACB}) = 45^\circ - x$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$

- A) 80° B) 90° C) 100° D) 110° E) 115°

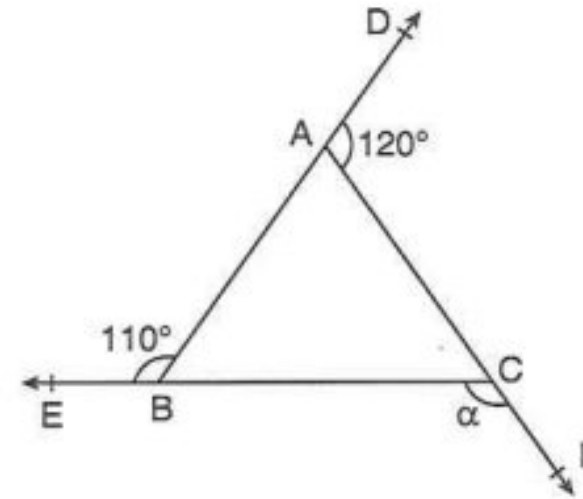
4.



$[ED] \perp [AC]$
 $m(\widehat{ABC}) = 100^\circ$
 $m(\widehat{DEC}) = 70^\circ$
 $\Rightarrow m(\widehat{BAC}) = \alpha = ?$

- A) 30° B) 40° C) 50° D) 60° E) 75°

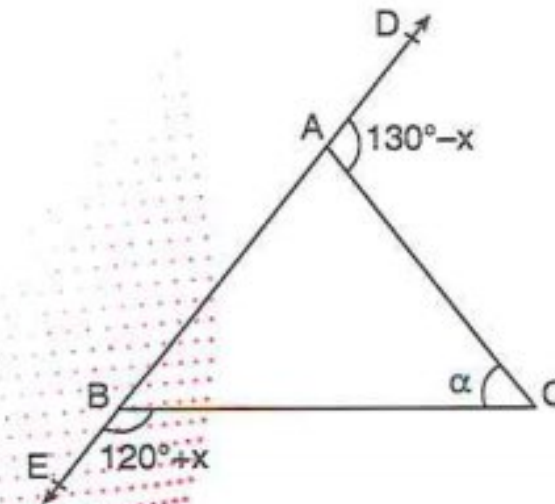
5.



$m(\widehat{DAC}) = 120^\circ$
 $m(\widehat{EBA}) = 110^\circ$
 $\Rightarrow m(\widehat{BCF}) = \alpha = ?$

- A) 130° B) 140° C) 150° D) 160° E) 170°

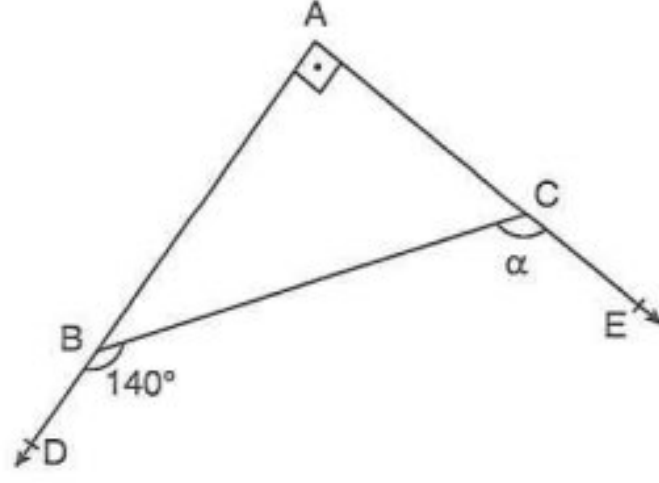
6.



$m(\widehat{DAC}) = 130^\circ - x$
 $m(\widehat{EBC}) = 120^\circ + x$
 $\Rightarrow m(\widehat{ACB}) = \alpha = ?$

- A) 50° B) 60° C) 70° D) 80° E) 90°

7.



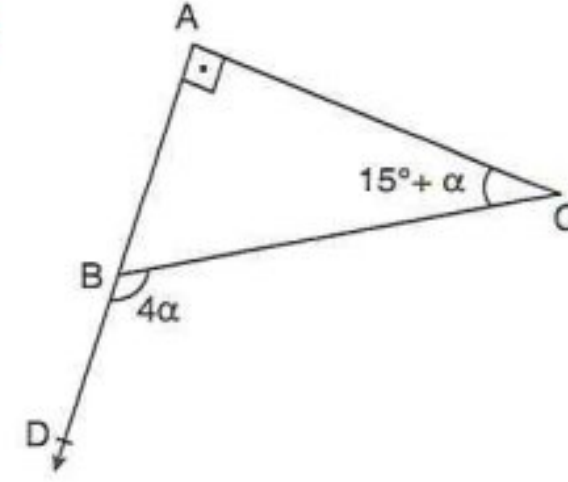
$$[AD \perp [AE]$$

$$m(\widehat{DBC}) = 140^\circ$$

$$\Rightarrow m(\widehat{BCE}) = \alpha = ?$$

- A) 120° B) 130° C) 140° D) 150° E) 160°

10.



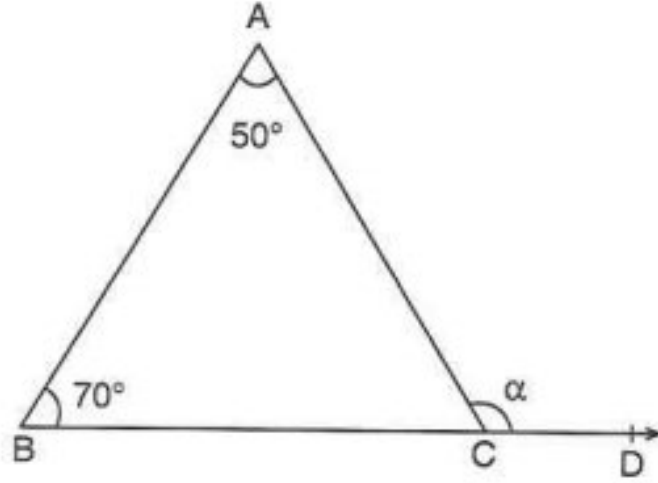
$$[AD \perp [AC]$$

$$m(\widehat{ACB}) = 15^\circ + \alpha$$

$$\Rightarrow 3\alpha = ?$$

- A) 95° B) 105° C) 115° D) 125° E) 135°

8.



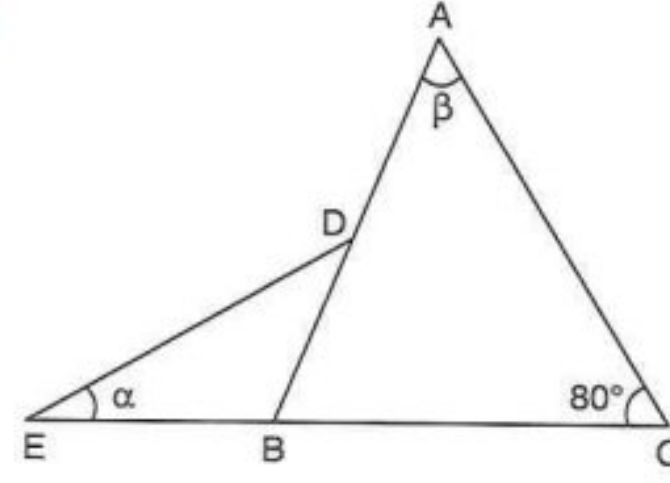
$$m(\widehat{BAC}) = 50^\circ$$

$$m(\widehat{ABC}) = 70^\circ$$

$$\Rightarrow m(\widehat{ACD}) = \alpha = ?$$

- A) 95° B) 100° C) 110° D) 120° E) 140°

11.



$$m(\widehat{ACB}) = 80^\circ$$

$$m(\widehat{BDE}) = 20^\circ$$

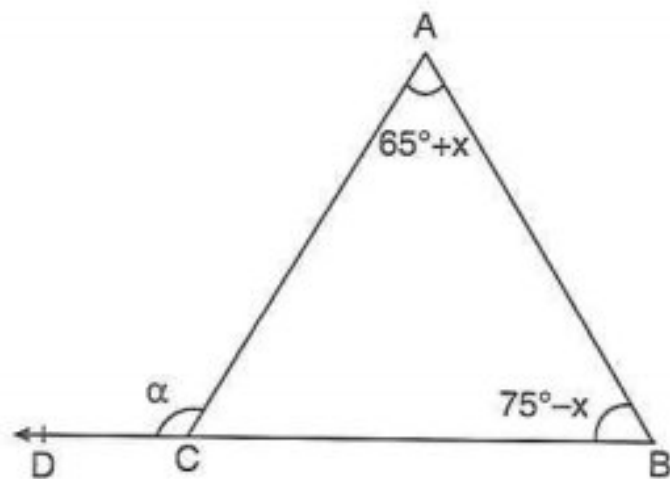
$$m(\widehat{BAC}) = \beta$$

$$m(\widehat{DEB}) = \alpha$$

$$\Rightarrow \alpha + \beta = ?$$

- A) 60° B) 70° C) 80° D) 90° E) 100°

9.



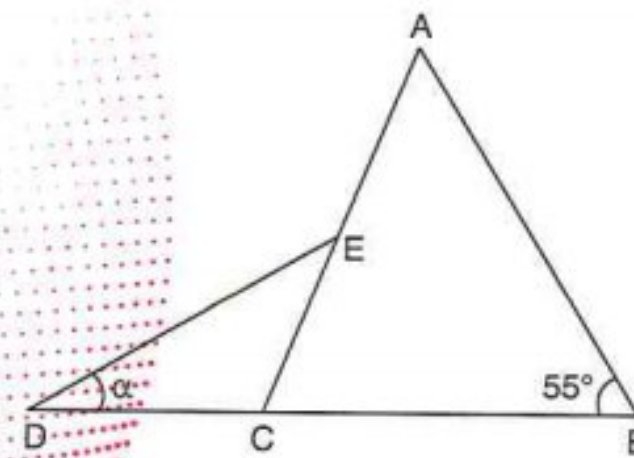
$$m(\widehat{CAB}) = 65^\circ + x$$

$$m(\widehat{ABC}) = 75^\circ - x$$

$$\Rightarrow m(\widehat{DCA}) = \alpha = ?$$

- A) 100° B) 110° C) 120° D) 130° E) 140°

12.



$$m(\widehat{CAB}) = 85^\circ$$

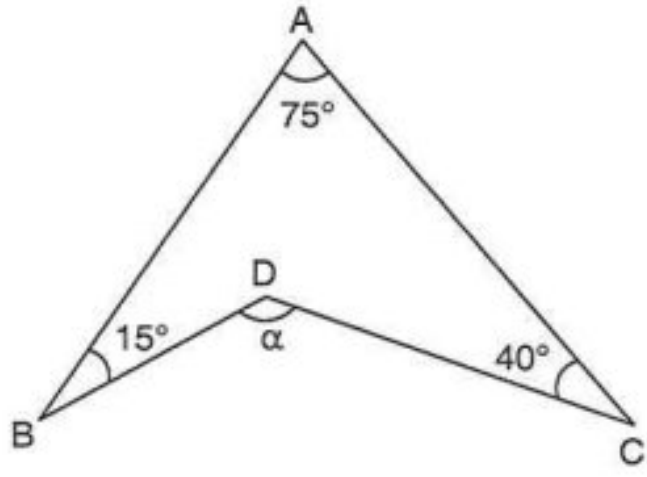
$$m(\widehat{ABC}) = 55^\circ$$

$$m(\widehat{DEC}) = 10^\circ$$

$$\Rightarrow m(\widehat{EDC}) = \alpha = ?$$

- A) 20° B) 30° C) 40° D) 50° E) 60°

13.

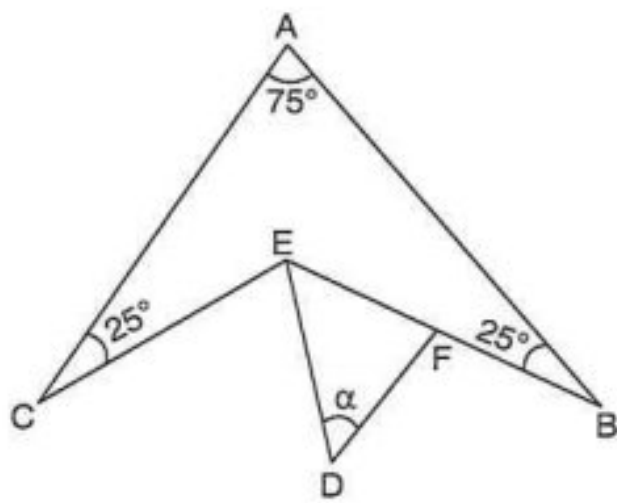


$m(\widehat{BAC}) = 75^\circ$
 $m(\widehat{ABD}) = 15^\circ$
 $m(\widehat{ACD}) = 40^\circ$

$\Rightarrow m(\widehat{BDC}) = \alpha = ?$

- A) 110° B) 120° C) 130° D) 140° E) 150°

14.

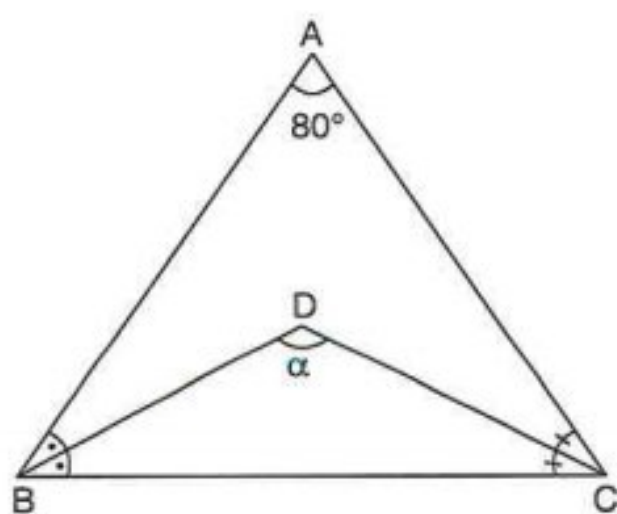


$m(\widehat{CAB}) = 75^\circ$
 $m(\widehat{ACE}) = 25^\circ$
 $m(\widehat{ABF}) = 25^\circ$
 $m(\widehat{CED}) = 55^\circ$
 $m(\widehat{EFD}) = 80^\circ$

$\Rightarrow m(\widehat{EDF}) = \alpha = ?$

- A) 25° B) 30° C) 35° D) 45° E) 50°

15.

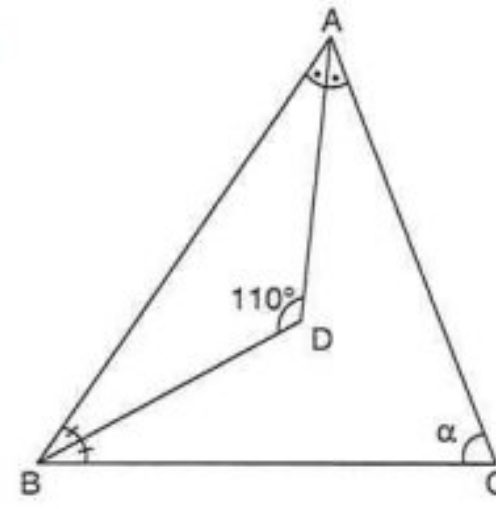


$m(\widehat{ABD}) = m(\widehat{DBC})$
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $m(\widehat{BAC}) = 80^\circ$

$\Rightarrow m(\widehat{BDC}) = \alpha = ?$

- A) 90° B) 105° C) 120° D) 130° E) 150°

16.

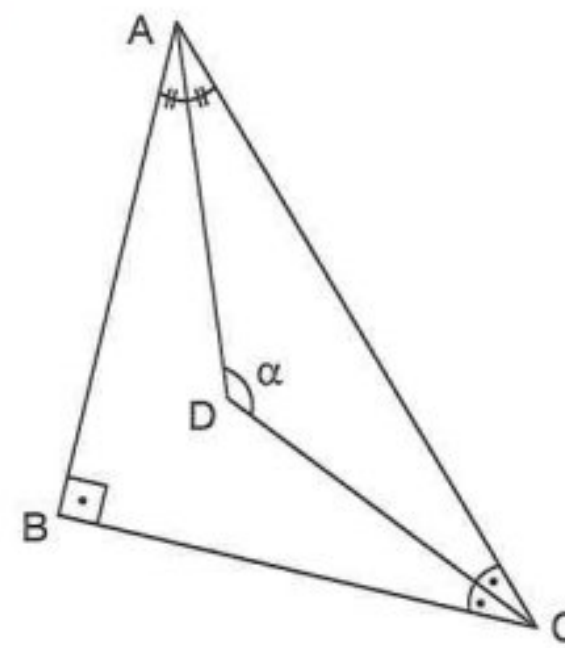


$m(\widehat{CAD}) = m(\widehat{DAB})$
 $m(\widehat{CBD}) = m(\widehat{DBA})$
 $m(\widehat{ADB}) = 110^\circ$

$\Rightarrow m(\widehat{ACB}) = \alpha = ?$

- A) 20° B) 30° C) 40° D) 60° E) 80°

17.

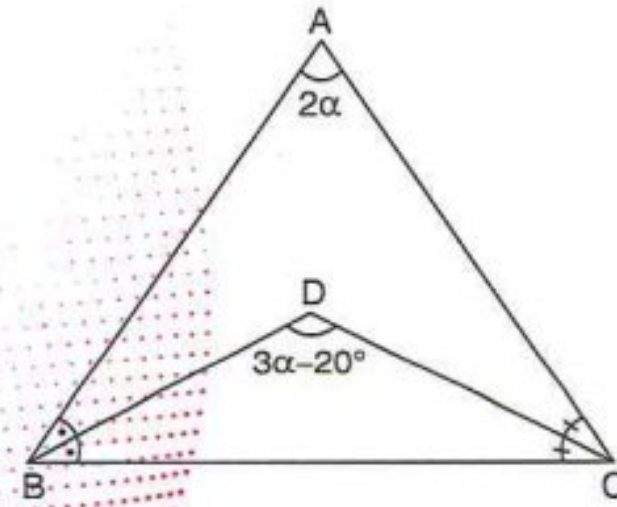


$[AB] \perp [BC]$
 $m(\widehat{BAD}) = m(\widehat{DAC})$
 $m(\widehat{ACD}) = m(\widehat{DCB})$

$\Rightarrow m(\widehat{ADC}) = \alpha = ?$

- A) 95° B) 110° C) 115° D) 125° E) 135°

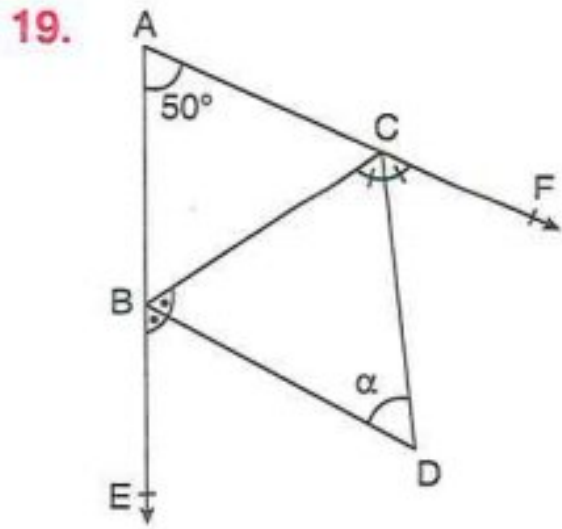
18.



$m(\widehat{ABD}) = m(\widehat{DBC})$
 $m(\widehat{ACD}) = m(\widehat{DCB})$
 $m(\widehat{BAC}) = 2\alpha$
 $m(\widehat{BDC}) = 3\alpha - 20^\circ$

$\Rightarrow \alpha = ?$

- A) 40° B) 55° C) 60° D) 75° E) 80°



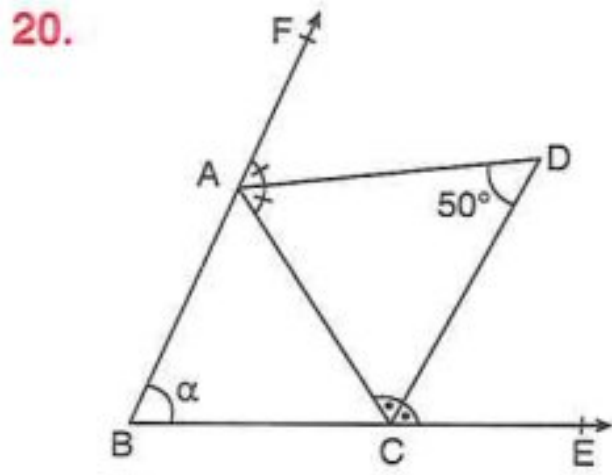
$$m(\widehat{CBD}) = m(\widehat{DBE})$$

$$m(\widehat{BCD}) = m(\widehat{FCD})$$

$$m(\widehat{BAC}) = 50^\circ$$

$$\Rightarrow m(\widehat{BDC}) = \alpha = ?$$

- A) 35° B) 40° C) 45° D) 55° E) 65°



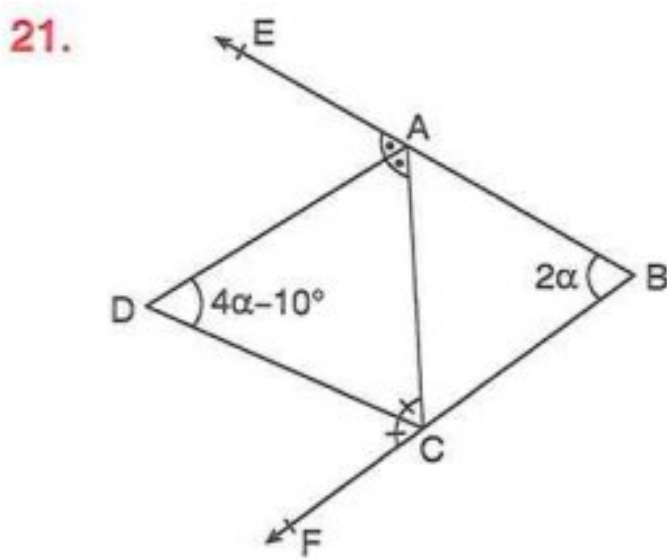
$$m(\widehat{FAD}) = m(\widehat{DAC})$$

$$m(\widehat{ACD}) = m(\widehat{DCE})$$

$$m(\widehat{ADC}) = 50^\circ$$

$$\Rightarrow m(\widehat{ABC}) = \alpha = ?$$

- A) 70° B) 80° C) 90° D) 100° E) 110°



$$m(\widehat{EAD}) = m(\widehat{DAC})$$

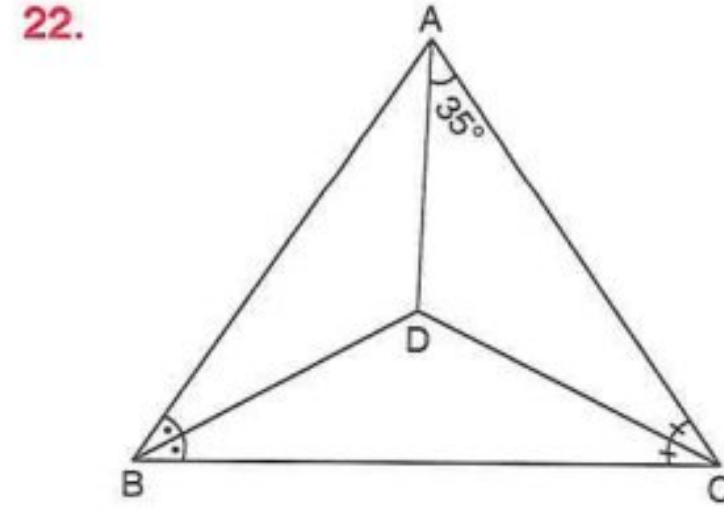
$$m(\widehat{ACD}) = m(\widehat{DCF})$$

$$m(\widehat{EBF}) = 2\alpha$$

$$m(\widehat{ADC}) = 4\alpha - 10^\circ$$

$$\Rightarrow \alpha = ?$$

- A) 20° B) 30° C) 45° D) 50° E) 65°



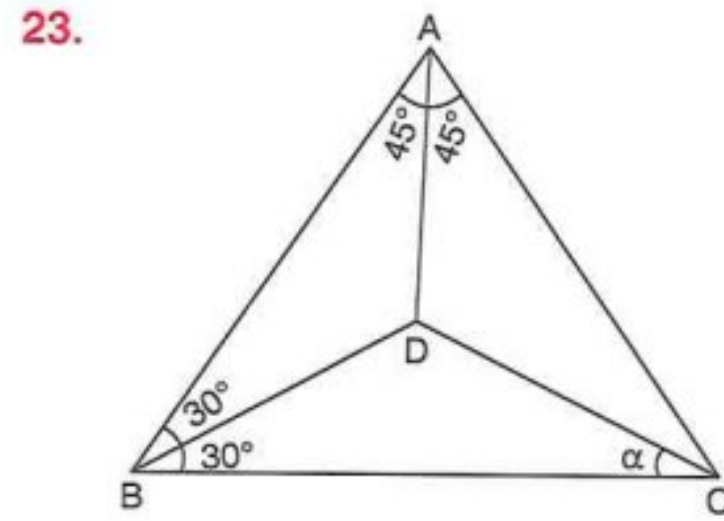
$$m(\widehat{ABD}) = m(\widehat{DBC})$$

$$m(\widehat{ACD}) = m(\widehat{DCB})$$

$$m(\widehat{DAC}) = 35^\circ$$

$$\Rightarrow m(\widehat{BAD}) = ?$$

- A) 25° B) 35° C) 45° D) 50° E) 60°

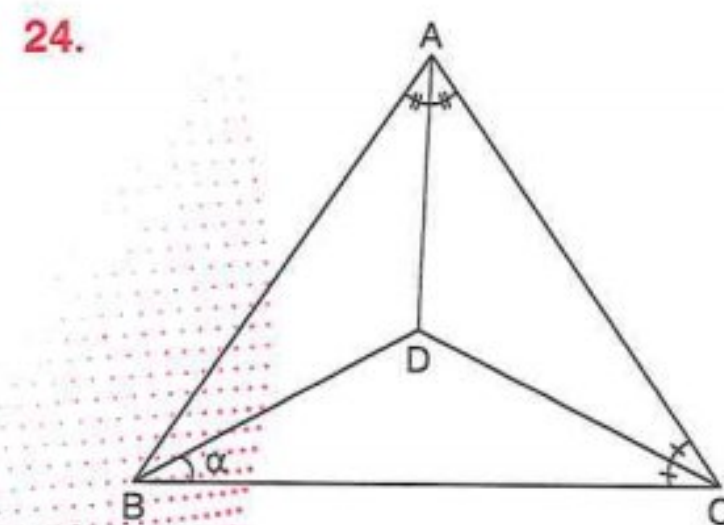


$$m(\widehat{BAD}) = m(\widehat{DAC}) = 45^\circ$$

$$m(\widehat{ABD}) = m(\widehat{DBC}) = 30^\circ$$

$$\Rightarrow m(\widehat{DCB}) = \alpha = ?$$

- A) 5° B) 15° C) 20° D) 25° E) 30°



$$m(\widehat{BAD}) = m(\widehat{DAC})$$

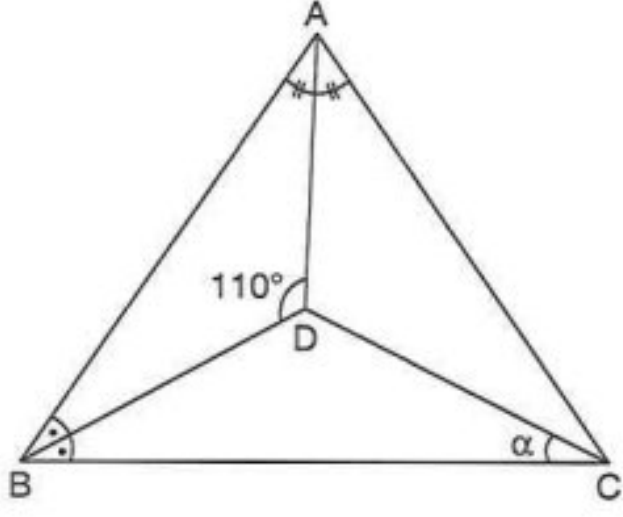
$$m(\widehat{ACD}) = m(\widehat{DCB})$$

$$m(\widehat{ABC}) = 80^\circ$$

$$\Rightarrow m(\widehat{DBC}) = \alpha = ?$$

- A) 40° B) 45° C) 50° D) 65° E) 80°

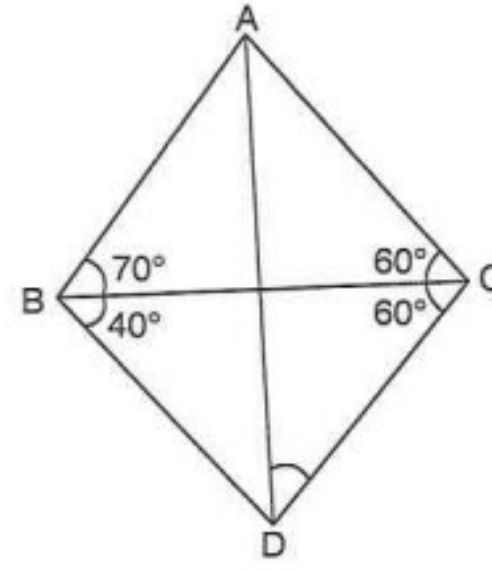
25.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAC}) \\ m(\widehat{ABD}) &= m(\widehat{DBC}) \\ m(\widehat{ADB}) &= 110^\circ \\ \Rightarrow m(\widehat{DCB}) &= \alpha = ? \end{aligned}$$

- A) 10° B) 20° C) 30° D) 40° E) 60°

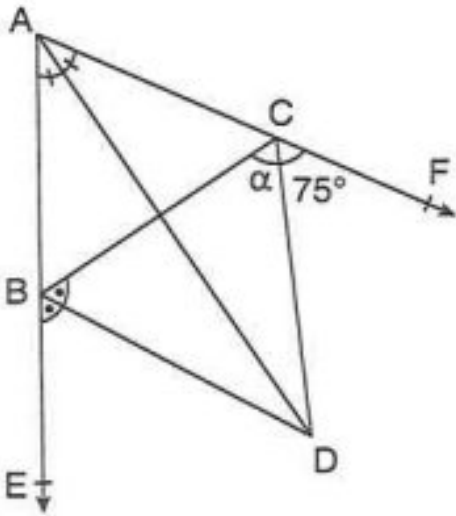
28.



$$\begin{aligned} m(\widehat{ACB}) &= m(\widehat{BCD}) = 60^\circ \\ m(\widehat{ABC}) &= 70^\circ \\ m(\widehat{CBD}) &= 40^\circ \\ \Rightarrow m(\widehat{ADC}) &= \alpha = ? \end{aligned}$$

- A) 30° B) 40° C) 50° D) 60° E) 80°

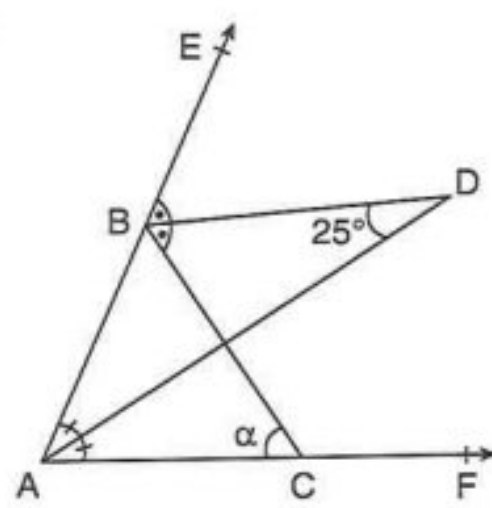
26.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAF}) \\ m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{DCF}) &= 75^\circ \\ \Rightarrow m(\widehat{BCD}) &= \alpha = ? \end{aligned}$$

- A) 30° B) 35° C) 45° D) 65° E) 75°

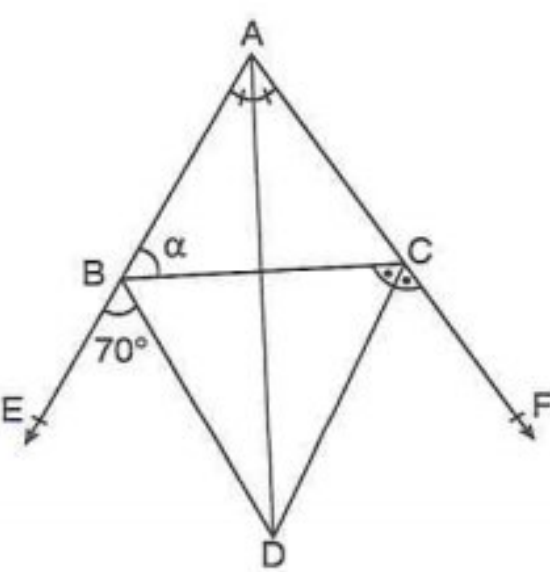
29.



$$\begin{aligned} m(\widehat{EBD}) &= m(\widehat{DBC}) \\ m(\widehat{BAD}) &= m(\widehat{DAF}) \\ m(\widehat{BDA}) &= 25^\circ \\ \Rightarrow m(\widehat{BCA}) &= \alpha = ? \end{aligned}$$

- A) 12.5° B) 25° C) 45° D) 50° E) 75°

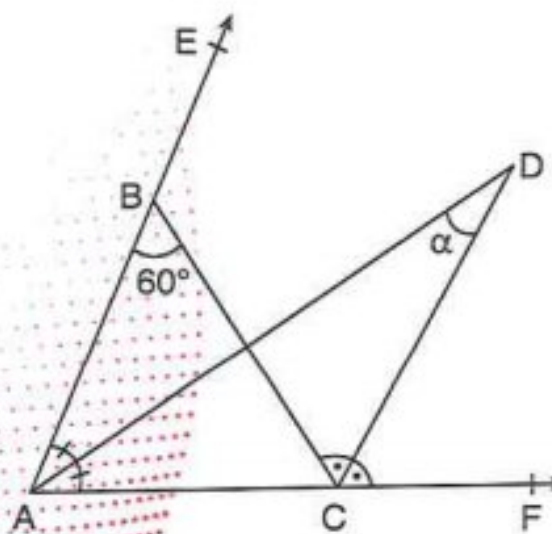
27.



$$\begin{aligned} m(\widehat{BAD}) &= m(\widehat{DAF}) \\ m(\widehat{BCD}) &= m(\widehat{FCD}) \\ m(\widehat{EBD}) &= 70^\circ \\ \Rightarrow m(\widehat{ABC}) &= \alpha = ? \end{aligned}$$

- A) 30° B) 40° C) 50° D) 60° E) 70°

30.



$$\begin{aligned} m(\widehat{EAD}) &= m(\widehat{DAF}) \\ m(\widehat{BCD}) &= m(\widehat{DCF}) \\ m(\widehat{ABC}) &= 60^\circ \\ \Rightarrow m(\widehat{ADC}) &= \alpha = ? \end{aligned}$$

- A) 20° B) 30° C) 50° D) 90° E) 120°