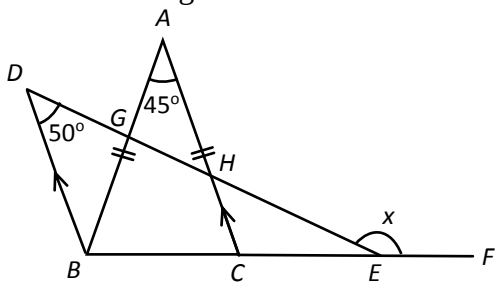
TB(2A) Ch. 5 Angles Related to Rectilinear Figures

Multiple Choice Questions

1. [10-11 Standardized Test 2]

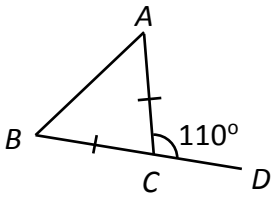
In the figure, $AB = AC$ and $AC \parallel BD$. $BCEF$ and $DGHE$ are straight lines. Find x.



A. 112.5°
B. 130°
C. 135°
D. 162.5°

2. [11-12 Final Exam #11]

In the figure, $AC=BC$, BCD is a straight line and $\angle ACD=110°$. Find $\angle ABC$.



A. 35°
B. 40°
C. 55°
D. 70°

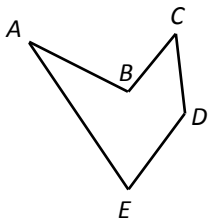
3. [11-12 Final Exam #19]

In a regular n-sided polygon, the difference between an interior angle and an exterior angle is 160°. Find the value of n.

A. 18
B. 24
C. 30
D. 36

4. [12-13 Final Exam #9]

In the figure, find the sum of all the interior angles of pentagon $ABCDE$.

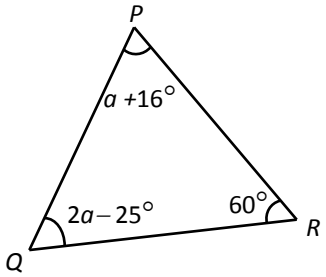


A. 180°
B. 360°
C. 540°
D. It cannot be determined

5. [12-13 Final Exam #10]

In the figure, which of the following(s) is / are true?

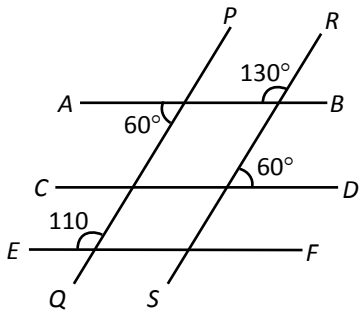
I. $a = 43°$
II. $RP = RQ$
III. ΔPQR is an equilateral triangle



A. I only
B. III only
C. I and II only
D. II and III only

6. [12-13 Final Exam #17]

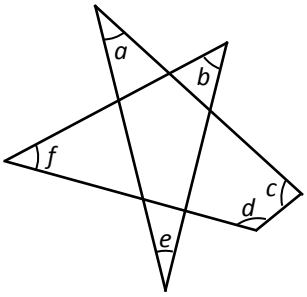
In the figure, which of the following is correct?



A. *AB* // *CD*
B. *AB* // *EF*
C. *CD* // *EF*
D. *PQ* // *RS*

7. [12-13 Final Exam #18]

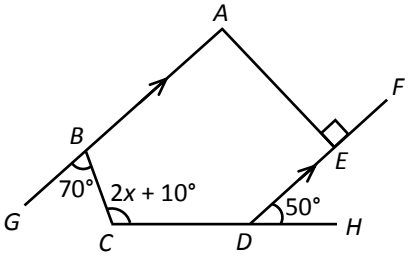
In the figure, find $a + b + c + d + e + f$.



A. 180°
B. 360°
C. 540°
D. 1 620°

8. [13-14 Final Exam #3]

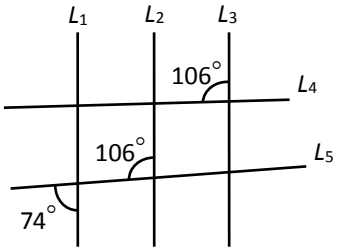
In the figure, *GBA*, *CDH* and *DEF* are straight lines. Find the value of x.



A. 50° **B.** 55°
C. 60° **D.** 65°

9. [13-14 Final Exam #5]

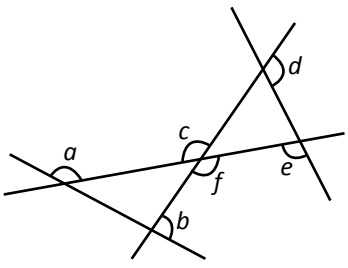
In the figure, L_1 to L_5 are five straight lines. Which of the following is correct?



A. L_1 // L_2 **B.** L_1 // L_3
C. L_2 // L_3 **D.** L_1 // L_2 // L_3

10. [13-14 Final Exam #12]

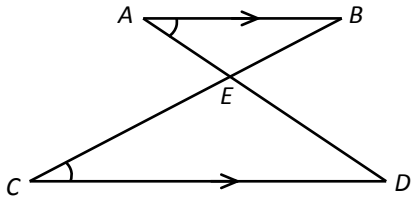
In the figure, $a + b + c + d + e + f =$



A. 270°. **B.** 360°.
C. 540°. **D.** 720°.

11. [13-14 Final Exam #16]

In the figure, $\angle BAE = \angle DCE$. E is the point of intersection of AD and BC. Which of the following must be true?

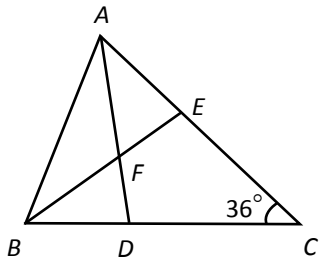


I. $AD = BC$
II. $\Delta ABE \sim \Delta CDE$
III. $\Delta ACE \cong \Delta BDE$

A. I and II only **B.** I and III only
C. II and III only **D.** I, II and III

12. [13-14 Final Exam #18]

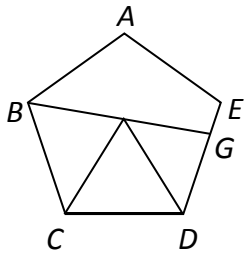
In the figure, $AC = BC$. AD and BE intersect at F and bisect $\angle BAC$ and $\angle ABC$ respectively. How many isosceles triangles can be found?



A. 6
B. 7
C. 8
D. 9

13. [13-14 S.6 Mock Exam #27]

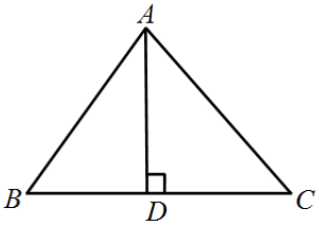
In the figure, $ABCDE$ is a regular pentagon. ΔCFD is equilateral and BFG is a straight line. Find $\angle EGB$.



A.84°
B.102°
C.112°
D.118°

14. [14-15 Standardized Test #4]

In the figure, AD is perpendicular to BC and $BD = DC$. $BC = AC$. Find $\angle BAC$.



A. 50° **B.** 55°
C. 60° **D.** 65°

15. [14-15 Standardized Test #9]

If an exterior angle of a regular *n*-sided polygon is smaller than its interior angle by $90°$, find the value of *n*.

A. 6 **B.** 7
C. 8 **D.** 9

16. [14-15 S.6 Mock Exam #7]

If an exterior angle of a regular *n*-sided polygon is half of an interior angle of the polygon, which of the following is/are true?

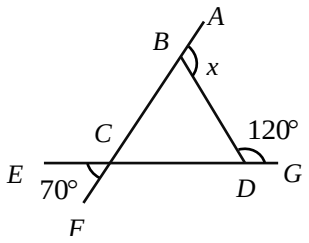
I. The value of *n* is 6.
II. The difference between an interior angle and an exterior angle of the polygon is 60°.
III. The number of axes of reflectional symmetry of the polygon is 3.

A. I only.
B. I and II only
C. II and III only
D. I, II and III

17. [14-15 Final Exam #8]

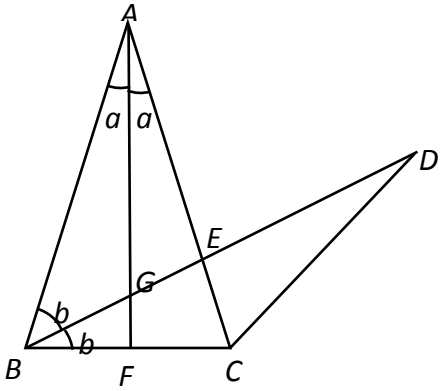
In the figure, *ABCF* and *ECDG* are straight lines. Find *x*.

A. 50°
B. 120°
C. 130°
D. 170°



18. [14-15 Final Exam #20]

In the figure, *AGF*, *AEC* and *BGED* are straight lines. *AF* and *BD* bisect $\angle BAC$ and $\angle ABC$ respectively. If $AB = AC$, find $\angle CED$ in terms of *a*.

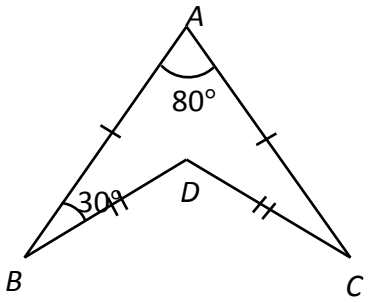


A. $2a$ **B.** $3a$
C. $90° - \frac{a}{2}$ **D.** $135° - \frac{3a}{2}$

19. [15-16 Final Exam #7]

In the figure, $AB = AC$ and $BD = CD$, $\angle BAC = 80°$ and $\angle ABD = 30°$. Find $\angle BDC$.

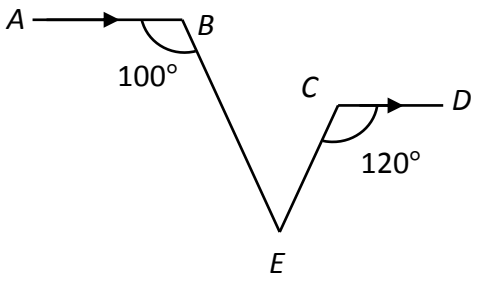
A. 110°
B. 120°
C. 140°
D. 160°



20. [15-16 Final Exam #6]

In the figure, AB // CD. It is given that $\angle ABE = 100°$ and $\angle DCE = 120°$. Find $\angle BEC$.

A. 20°
B. 40°
C. 60°
D. 80°



21. [15-16 Final Exam #5]

If the value of an interior angle is four times that of the exterior angle of an n-sided regular polygon, find n.

A. 6
B. 7
C. 8
D. 10

~ End ~