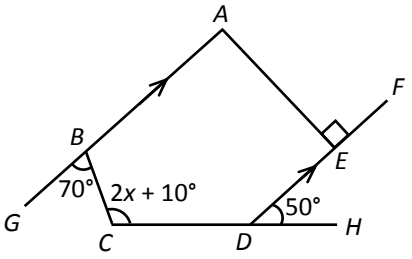
TB(2A) Ch. 5 Angles Related to Rectilinear Figures
Multiple Choice Questions

1. [13-14 Final Exam #3]

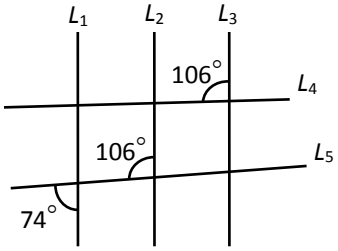
In the figure, *GBA*, *CDH* and *DEF* are straight lines. Find the value of *x*.



A. 50° **B.** 55°
C. 60° **D.** 65°

2. [13-14 Final Exam #5]

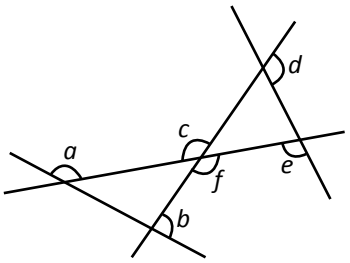
In the figure, L_1 to L_5 are five straight lines. Which of the following is correct?



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

3. [13-14 Final Exam #12]

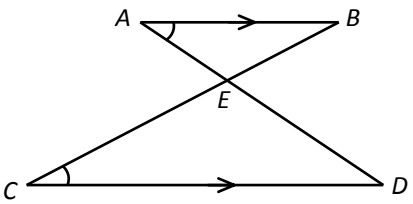
In the figure, $a + b + c + d + e + f =$



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

4. [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?



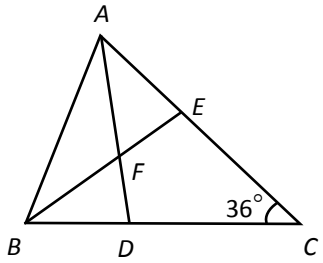
I. $AD = BC$
II. $\Delta ABE \sim \Delta CDE$
III. $\Delta ACE \cong \Delta BDE$

A. I and II only **B.** I and III only

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

5. [13-14 Final Exam #18]

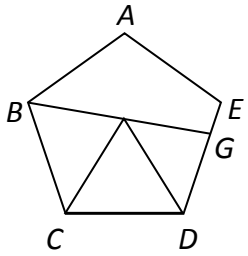
In the figure, $AC = BC$. AD and BE intersect at F and bisect $\angle BAC$ and $\angle ABC$ respectively. How many isosceles triangles can be found?



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

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

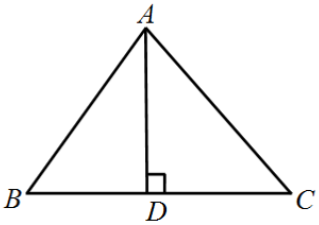
In the figure, $ABCDE$ is a regular pentagon. ΔCFD is equilateral and BFG is a straight line. Find $\angle EGB$.



A. 84°
B. 102°
C. 112°
D. 118°

7. [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°

8. [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

9. [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.

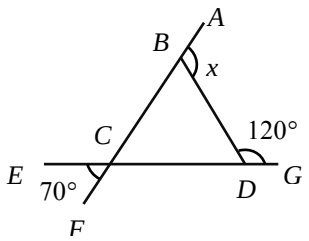
A. I only.
B. I and II only

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

10. [14-15 Final Exam #8]

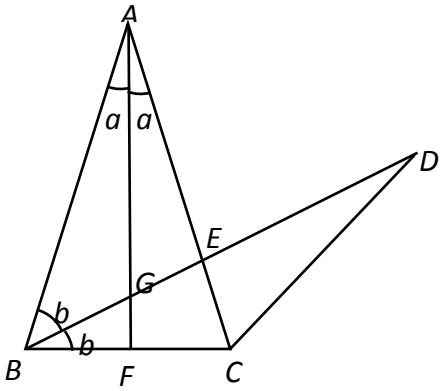
In the figure, *ABCF* and *ECDG* are straight lines. Find *x*.

A. 50°
B. 120°
C. 130°
D. 170°



11. [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*.

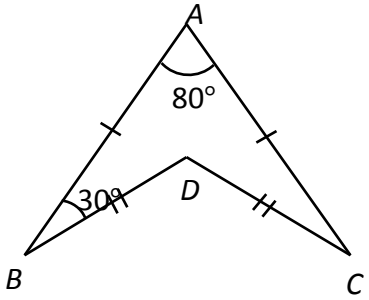


A. $2a$ **B.** $3a$
C. $90° - \frac{a}{2}$ **D.** $135° - \frac{3a}{2}$

12. [15-16 Final Exam #7]

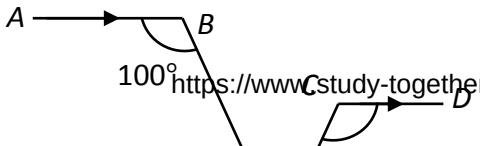
In the figure, $AB = AC$ and $BD = CD$, $\angle BAC = 80°$ and $\angle ABD = 30°$. Find $\angle BDC$.

A. 110°
B. 120°
C. 140°
D. 160°



13. [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°

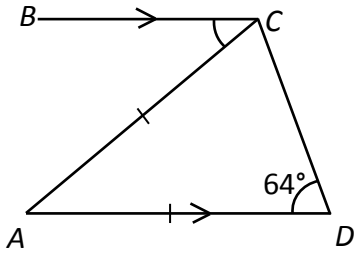
14. [15-16 Final Exam #5]

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

15. [16-17 Final Exam #8]

In the figure, $AC = AD$. If $BC \parallel AD$, then $\angle ACB =$



A. 52°.
B. 62°.
C. 64°.
D. 78°.

16. [16-17 Final Exam #16]

If the interior angle of a regular polygon is 144° greater than its exterior angle, find the number of sides of the polygon.

A. 16
B. 18
C. 20
D. 22

17. [17-18 S Test 2 #8]

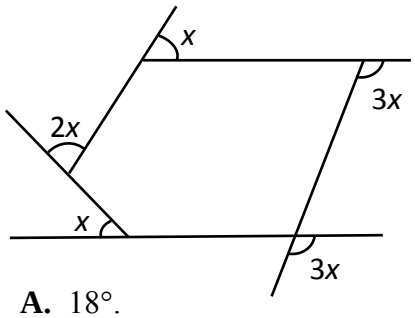
If an interior angle of a regular *n*-sided polygon is eight times of an exterior angle, which of the following are true?

I. The value of *n* is 18.
II. An interior angle of the polygon is greater than an exterior angle by 140°.
III. The number of axes of reflectional symmetry of the polygon is 9.

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

18. [17-18 Final #8]

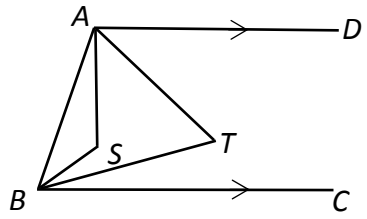
In the figure, x =



A. 18°.
B. 36°.
C. 45°.
D. 54°.

19. [17-18 Final #17]

In the figure, AD // BC, $\angle SAT = \angle TAD$, $\angle SBT = \angle TBC$ and ΔABT is an equilateral triangle. Find reflex $\angle ASB$.



A. 220°
B. 240°
C. 280°
D. 300°

~ End ~