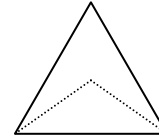


Section 3.1

1. What is the measure of the central angle of this equilateral triangle?



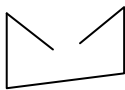
- [A] 180° [B] 120° [C] 90° [D] 60°

2. How many sides does a nonagon have?

- [A] 7 [B] 9 [C] 11 [D] 19

3. Which figure is a polygon?

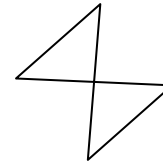
[A]



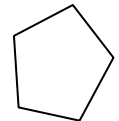
[B]



[C]



[D]



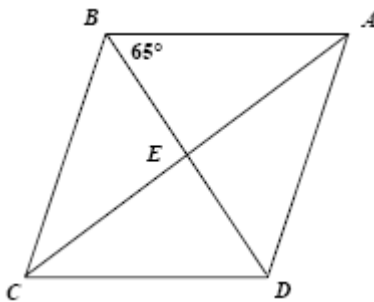
Section 3.2

4. Select the geometric figure that possesses all of the following characteristics:

- i. Quadrilateral
- ii. Diagonals are equal
- iii. Opposite sides that are parallel

- [A] parallelogram [B] rectangle [C] rhombus [D] trapezoid

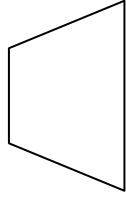
5. Use the rhombus below.



What is the measure of $\angle CDE$?

- [A] 25° [B] 65° [C] 90° [D] 115°

6. Which does *not* describe the figure correctly?



[A] parallelogram

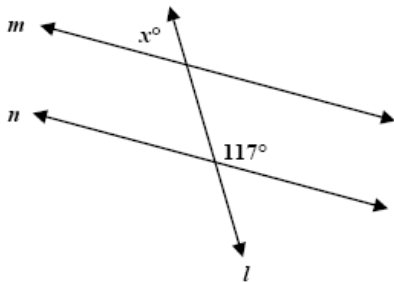
[B] polygon

[C] quadrilateral

[D] trapezoid

Section 3.3

7. In the figure below, $n \parallel m$ and l is a transversal.



What is the value of x° ?

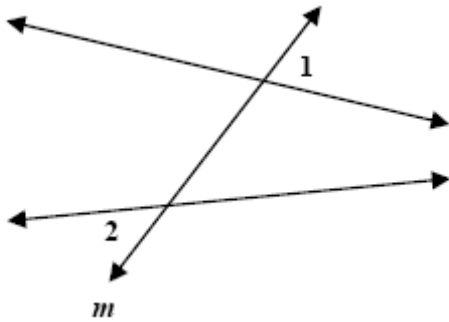
[A] 180

[B] 117

[C] 63

[D] 53

8. In the figure below, line m is a transversal.



Which best describes the pair of angles $\angle 1$ and $\angle 2$

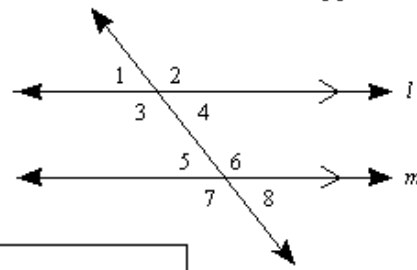
[A] Alternate Exterior

[B] Alternate Interior

[C] Corresponding

[D] Vertical

9. Given: $l \parallel m$
 Prove: $\angle 2$ and $\angle 8$ are supplementary



Which proof is correct?

[A]	$l \parallel m$ $\angle 2 \cong \angle 3$ $\angle 3$ and $\angle 5$ are suppl. $\angle 5 \cong \angle 8$ $\angle 2$ and $\angle 8$ are suppl.	Given Vertical Angles Same - side Interior Angles Vertical Angles Theorem Substitution
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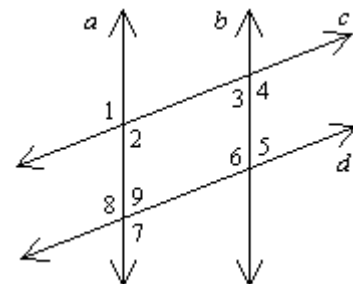
[B]	$l \parallel m$ $\angle 2 \cong \angle 3$ $\angle 4$ and $\angle 5$ are suppl. $\angle 5 \cong \angle 8$ $\angle 2$ and $\angle 8$ are suppl.	Given Vertical Angles Same - side Interior Angles Vertical Angles Theorem Substitution
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[C]	$l \parallel m$ $\angle 2 \cong \angle 3$ $\angle 3$ and $\angle 5$ are suppl. $\angle 5 \cong \angle 8$ $\angle 2$ and $\angle 8$ are suppl.	Given Same - side Interior Angles Vertical Angles Vertical Angles Theorem Substitution
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[D] none of these

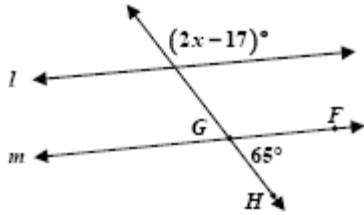
Section 3.4

10. Given: $\angle 1 \cong \angle 4$
 Which lines, if any, must be parallel based on the given diagram and information? Give the justification for the conclusion.



- [A] $a \parallel b$, Alternate Interior Angles Converse
 [B] $a \parallel b$, Alternate Exterior Angles Converse
 [C] $c \parallel d$, Consecutive Angles Converse
 [D] No conclusions can be drawn from the given information

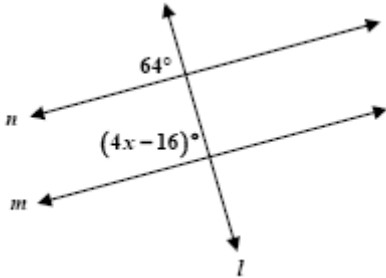
11. In the figure $m\angle FGH = 65^\circ$.



What value of x would make line l parallel to line m ?

- [A] 41 [B] 49 [C] 65 [D] 66

12. In the figure below, $n \parallel m$ and l is a transversal.



What is the value of x ?

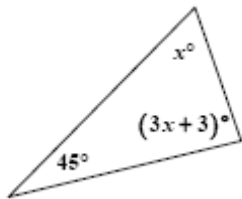
- [A] 33 [B] 29 [C] 20 [D] 16

Section 3.5

13. In $\triangle EFG$, $m\angle E = 85^\circ$ and $m\angle F = 25^\circ$. What is $m\angle G$?

- [A] 60° [B] 70° [C] 110° [D] 180°

14. Use the triangle below.

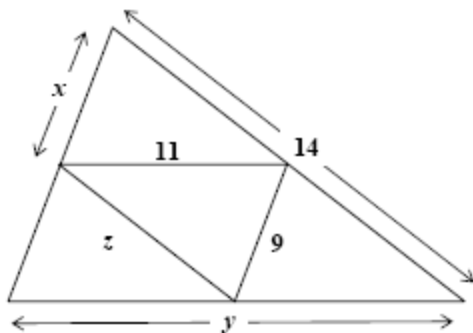


What is the value of x ?

- [A] 29 [B] 33 [C] 44 [D] 49

Section 3.7

19. The triangle below contains three midsegments.



What are the values of x , y , and z ?

- [A] $x = 9, y = 22, z = 7$ [B] $x = 9, y = 11, z = 14$ [C] $x = 9, y = 22, z = 14$ [D] $x = 9, y = 11, z = 7$

20. In $\triangle ABC$, $\angle B$ is a right angle and $m\angle A = 40^\circ$. Which list shows the sides in order from longest to shortest?

- [A] $\overline{AB}, \overline{BC}, \overline{AC}$ [B] $\overline{BC}, \overline{AB}, \overline{AC}$ [C] $\overline{AC}, \overline{BC}, \overline{AB}$ [D] $\overline{AC}, \overline{AB}, \overline{BC}$

21. A triangle has two sides that have lengths of 7 cm and 17 cm. Which could represent the length of the third side of the triangle?

- [A] 24 cm [B] 18 cm [C] 10 cm [D] 7 cm

Section 3.8

22. What are the coordinates of the midpoint of the segment joining the points $A(-3, -4)$ and $B(4, 2)$?

- [A] $\left(-3\frac{1}{2}, 3\right)$ [B] $\left(-\frac{1}{2}, -1\right)$ [C] $\left(\frac{1}{2}, -1\right)$ [D] $\left(\frac{1}{2}, -3\right)$

23. Which best describes the relationship between the line that passes through $(3, -6)$ and $(6, -2)$ and the line that passes through $(-1, -9)$ and $(-5, -6)$?

- [A] Perpendicular [B] Parallel [C] Neither perpendicular nor parallel [D] Same Line

24. What is the distance between points $A(-2, -6)$ and $B(-2, -3)$?

- [A] 3 [B] $\sqrt{41}$ [C] 9 [D] $\sqrt{89}$

Key- Unit 3 Pretest

1. B
2. B
3. D
4. C
5. B
6. A
7. C
8. A
9. A
10. B
11. D
12. C
13. B
14. B
15. C
16. A
17. B
18. C
19. A
20. D
21. B
22. C
23. A
24. A