

7. yes:  $\angle 7$  and  $\angle 2$  are alternate interior angles.  
 $\angle 2$  and  $\angle 10$  are corresponding angles.
8. no
9. true
10. true:  $\angle 1$  and  $\angle 14$  are alternate exterior angles.  
 $\angle 14$  and  $\angle 16$  are corresponding angles.
11. false
12. true: Parallel lines do not intersect.
13. The two lines cut by a transversal are parallel.
14. They lie on the same plane.
15. gamma
16. alpha
17.  $\frac{1}{-1} = -1$
18.  $\frac{3}{1} = 3$
19.  $\frac{1}{-2} = -\frac{1}{2}$
20.  $\frac{1}{1} = 1$

### Lesson Practice 8A

1. square (or rectangle)
2. rectangle
3. triangle
4. rhombus (or quadrilateral)
5. trapezoid
6. parallelogram (or quadrilateral)
7.  $P = 4 + 4 + 4 + 4 = 16$  m
8.  $P = 8 + 6 + 8 + 6 = 28$  in
9.  $P = 6.1 + 5.5 + 4.9 = 16.5$  ft
10.  $P = 10 + 10 + 10 + 10 = 40$  cm
11.  $P = 3 + 6.5 + 7 + 8 = 24.5$  in
12.  $P = 15 + 23 + 15 + 23 = 76$  mm
13. true
14. true
15. false: They add up to  $360^\circ$ .

16. true
17. false: A right angle is possible but not necessary.
18. true
19. false: It has 2 pairs of parallel sides.
20. true

### Lesson Practice 8B

1. triangle
2. parallelogram
3. square
4. trapezoid
5. rhombus
6. rectangle
7.  $P = 3 + 3 + 3 + 3 = 12$  m
8.  $P = 11 + 8 + 11 + 8 = 38$  in
9.  $P = 3.9 + 5.0 + 5.3 = 14.2$  ft
10.  $P = 18 + 32 + 45 + 23 = 118$  in
11. length of unlabeled horizontal side:  
 $4 - 2 = 2$  m  
length of unlabeled vertical side:  
 $6 - 4 = 2$  m  
 $P = 4 + 4 + 2 + 2 + 2 + 6 = 20$  m
12. length of top horizontal side:  
 $40 - 12 - 12 = 16$  in  
 $P = 16 + 12 + 12 + 16 + 40 + 16 + 12 + 12 = 136$  in
13. triangle
14. quadrilateral
15. square
16. rhombus
17. triangle
18. quadrilateral
19. trapezoid
20. parallelogram

### Systematic Review 8C

1. b
2. a
3. f



4. d
5. e
6. c
7.  $P = 3 + 5 + 7 = 15$  m
8.  $P = 4 + 6 + 10 + 5 = 25$  in
9.  $180^\circ$
10.  $360^\circ$
11. is parallel to, or  $\parallel$
12. If two corresponding angles are congruent, then the lines are parallel.
13. If two lines are parallel, corresponding angles are congruent.
14. is parallel to, or  $\parallel$
15. If alternate exterior angles are congruent, the two lines cut by the transversal are parallel.
16.  $\angle 12$
17.  $106^\circ$ ;  $\angle 3$  and  $\angle 4$  are supplementary;  $\angle 4$  and  $\angle 8$  are corresponding.
18. Same as #17, or  $\angle 3$  and  $\angle 6$  are alternate interior angles;  $\angle 6$  and  $\angle 8$  are supplementary.
19.  $74^\circ$
20.  $\angle 3$  and  $\angle 11$  are corresponding angles.

### Systematic Review 8D

1. right
2. quadrilateral
3. square
4. rhombus
5. trapezoid
6. parallelogram
7.  $P = 5 + 7 + 11 = 23$  m
8.  $P = 4 + 6 + 10 + 5 = 25$  in
9.  $P = 10 + 10 + 10 + 10 = 40$  cm
10. length of unlabeled horizontal side:  
 $10 - 2 - 3 = 5$  in  
 $P = 2 + 2.5 + 5 + 2.5 + 3 + 6 + 10 + 6 = 37$  in

11. transversal; parallel  
There may be alternate explanations for #12, 13, 14.
12.  $54^\circ$ ;  $\angle a$  and  $\angle g$  are alternate interior angles.
13.  $54^\circ$ ;  $\angle b$  and  $\angle d$  are alternate interior angles.
14.  $72^\circ$ ;  $m\angle d + m\angle g = 108^\circ$ , therefore  $m\angle 2 = 108^\circ$ : alternate interior angles
15. acute
16.  $108^\circ$
17. supplementary or adjacent
18.  $\angle FDE$ ,  $\angle FGE$ ,  $\angle 3$ , or  $\angle 2$
19. a and b (or d and g)
20. If two lines are perpendicular, they form right angles.

### Systematic Review 8E

1. true
2. false: They add up to  $180^\circ$ .
3. true
4. false: It has one pair of parallel sides.
5. true
6. false
7.  $P = 5 + 4 + 3 = 12$  in
8. length of unlabeled horizontal side:  
 $12 - 8 = 4$  in  
length of unlabeled vertical side:  
 $8 - 2 = 6$  in  
 $P = 8 + 6 + 4 + 2 + 12 + 8 = 40$  in
9.  $\overline{QT}$  or  $\overline{QR}$  or  $\overline{ST}$  or  $\overline{SQ}$  or  $\overline{RT}$   
Every line segment in the drawing cuts through a pair of parallel line segments.
10.  $\perp$ , or is perpendicular to
11.  $\parallel$ , or is parallel to
12. complementary
13. alternate
14. yes



15. no
16.  $90^\circ - 43^\circ = 47^\circ$
17. no
18. If the midpoint of line segment DP is point A, A is the middle point of the line segment.
19. slope = -2; y-intercept = 4
20. slope = 1; y-intercept = -2

### Lesson Practice 9A

1.  $A = bh = (12.4)(10.6) \approx 131.4 \text{ ft}^2$
2.  $A = \text{average base} \times \text{height} = \left(\frac{10+15}{2}\right)(5) = \left(\frac{25}{2}\right)(5) = \frac{125}{2} = 62.5 \text{ ft}^2$
3.  $A = \frac{1}{2}bh = \frac{1}{2}(19)(11) = 104.5 \text{ m}^2$
4.  $A = \left(\frac{9.2+11.8}{2}\right)(7.4) = 77.7 \text{ in}^2$
5.  $A = (8)(6) = 48 \text{ in}^2$
6.  $A = \frac{1}{2}(4)(6) = 12 \text{ ft}^2$
7.  $A = (6)(6) = 36 \text{ m}^2$
8.  $A = \left(\frac{5.6+7.8}{2}\right)(3.5) = 23.45 \text{ in}^2$
9.  $A = \frac{1}{2}(5)(4.3) = 10.75 \text{ cm}^2$
10.  $A = (67)(100) = 6,700 \text{ cm}^2$
11.  $A = (2.1)(4.5) = 9.45 \text{ ft}^2$
12.  $A = \frac{1}{2}(7)(3) = 10.5 \text{ ft}^2$
13. base, height
14. average
15. half

### Lesson Practice 9B

1.  $A = (7.4)(4.75) = 35.15 \text{ in}^2$
2.  $A = \left(\frac{9.2+11.8}{2}\right)(7.4) = 77.7 \text{ in}^2$

3.  $A = \frac{1}{2}(9.2)(5.5) = 25.3 \text{ m}^2$
4.  $A = \left(\frac{12+16}{2}\right)(8) = 112 \text{ in}^2$
5.  $A = \left(\frac{9+13}{2}\right)(3) = 33 \text{ ft}^2$
6.  $A = \frac{1}{2}(3.3)(5.5) = 9.075 \text{ ft}^2$
7.  $A = (.05)(.05) = .0025 \text{ m}^2$
8.  $A = \left(\frac{112+156}{2}\right)(70) = 9,380 \text{ ft}^2$
9.  $A = \frac{1}{2}(5.33)(3.5) = 9.3275 \text{ ft}^2$
10.  $A = (2.33)(1.2) = 2.796 \text{ in}^2$
11.  $A = (4)(10) + (2)(3) = 40 + 6 = 46 \text{ in}^2$
12.  $A = \frac{1}{2}(28)(12) = 168 \text{ ft}^2$
13. perpendicular
14. trapezoid
15. rectangle

### Systematic Review 9C

1.  $A = \frac{1}{2}(5)(6) = 15 \text{ cm}^2$
2.  $A = \left(\frac{13+21}{2}\right)(12) = 204 \text{ in}^2$
3.  $A = (7)(6) = 42 \text{ ft}^2$
4.  $A = (1.5)(4.5) = 6.75 \text{ in}^2$
5. rectangle, square
6. parallelogram, rectangle, square, rhombus
7. square
8. trapezoid
9. a quadrilateral with two pairs of parallel sides
10. a quadrilateral with two pairs of parallel sides and four congruent sides and four right angles
11. yes: corresponding angles
12. yes: alternate interior angles