

**Practice
12-1****Geometry Drawing Tools**

1. What geometric shapes can you draw that have exactly four pairs of perpendicular sides? Check all that apply.
☐ A. square ☐ C. rectangle
☐ B. trapezoid ☐ D. regular octagon
2. What geometric shapes can you draw that have exactly one pair of parallel sides? Check all that apply.
☐ A. regular pentagon ☐ C. regular octagon
☐ B. trapezoid ☐ D. parallelogram
3. What quadrilaterals can you draw that have two sides with length 9 cm and two sides with length 4 cm? Check all that apply.
☐ A. parallelogram ☐ C. trapezoid
☐ B. kite ☐ D. square
4. A four-sided sandbox has more than two right angles, two side lengths 2 ft, and two side lengths 5 ft. What geometric shape best describes the shape of the sandbox?
☐ A. parallelogram ☐ C. rectangle
☐ B. kite ☐ D. trapezoid
5. A friend is building a garden with two side lengths 19 ft and exactly one right angle. What geometric figures could describe how the garden might look? Check all that apply.
☐ A. isosceles right triangle ☐ C. quadrilateral
☐ B. kite ☐ D. parallelogram
6. A park has a pond shaped like a quadrilateral with side lengths 17 feet and no right angles. What geometric shape best describes the shape of the pond?
☐ A. square ☐ C. quadrilateral
☐ B. rhombus ☐ D. kite

7. a) **Writing** Which quadrilateral has exactly one pair of parallel sides and no right angles? _____

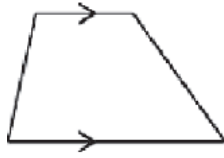


Figure A

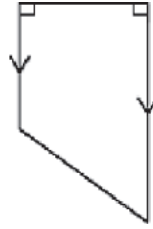


Figure B

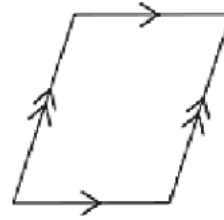
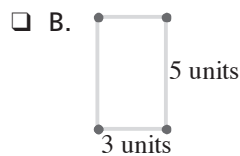
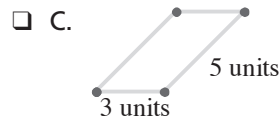
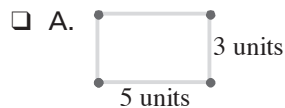


Figure C

(Matching arrowheads in a figure indicate parallel sides.)

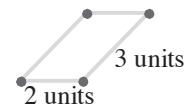
- b) Which quadrilateral has exactly one pair of parallel sides and two right angles? _____

8. a) **Reasoning** Which quadrilaterals have two side lengths of 3 units, two side lengths of 5 units, and at least two right angles? Same-length sides are opposite each other. Check all that apply.

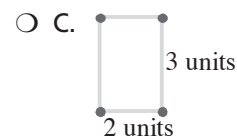
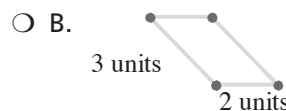
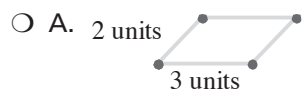


- b) Are the quadrilaterals the same?
c) Explain the conditions for which you can form a unique quadrilateral with at least one right angle.

9. **Error Analysis** Students are told to draw a rectangle with the given conditions: two sides with a length of 2 units and two sides with a length of 3 units. One student drew the figure shown.



- a) Which is the correct rectangle?

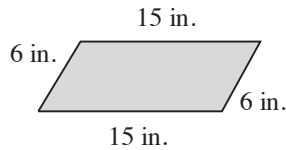


- b) What mistake might the student have made?

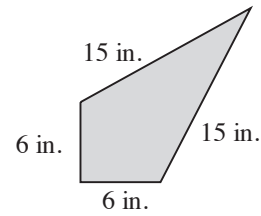
- ☐ A. The student drew a parallelogram instead of a rectangle.
☐ B. The figure is slanted in the incorrect direction.
☐ C. The order of the side lengths should be switched.

- 10. Kite** You are making a kite that has one right angle with side lengths 6 in. and 15 in. The perpendicular sides of the kite are of length 6 in. What should the kite look like?

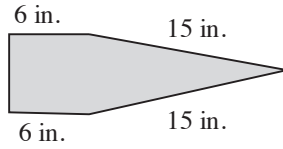
☐ A.



☐ C.



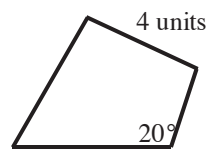
☐ B.



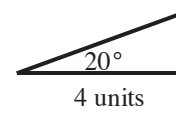
(These figures are not to scale.)

- 11. Multiple Representations** Which quadrilateral has one angle measure of 20° and exactly one side length of 4 units?

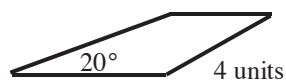
☐ A.



☐ B.



☐ C.



- 12.** A triangle has two 110° angles. Why is it not possible to draw a figure with the given conditions?

- ☐ A. It is not possible because the rays forming the angles will never meet.
☐ B. It is not possible because the sum of the angles is 180° .
☐ C. It is not possible because the sum of the angles is less than 180° .
☐ D. It is not possible because a triangle must have a right angle.

- 13.** Which quadrilateral has exactly one pair of parallel sides and no right angles?

- ☐ A. trapezoid
☐ B. square
☐ C. parallelogram
☐ D. kite

- 14. Challenge** The figure shown is made up of identical rectangles. One side length is 9 in. The other side length is 3 in. longer.

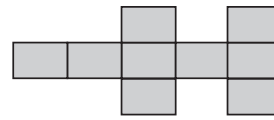
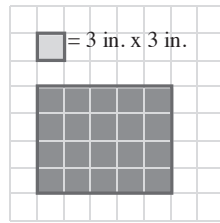


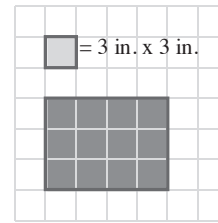
Figure not to scale.

- a) Which rectangle has the correct dimensions?

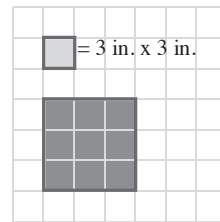
☐ A.



☐ C.



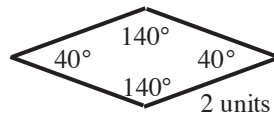
☐ B.



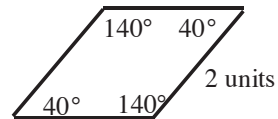
- b) How long is the figure?

- 15. Challenge** Which rhombus is correctly labeled with side lengths of 2 units and angle measures of 40° , 140° , 40° , and 140° ?

☐ A.



☐ C.



☐ B.

