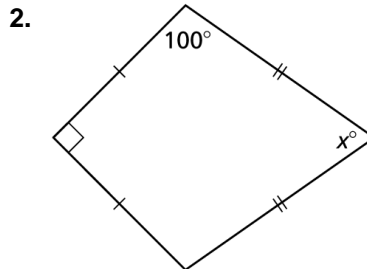
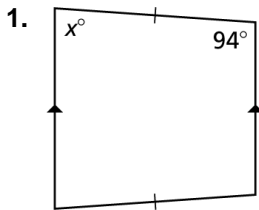


7.5

Practice A

In Exercises 1 and 2, find the value of x .

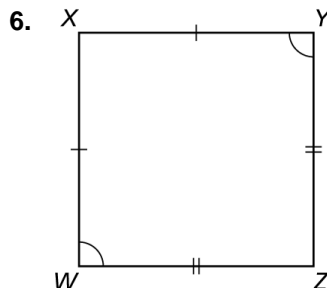
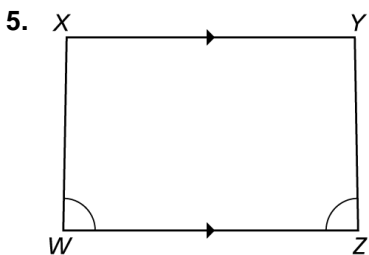


In Exercises 3 and 4, find the length of the midsegment of the trapezoid with the given vertices.

3. $A(0, 3), B(4, 5), C(4, -2), D(0, -2)$

4. $E(-3, 3), F(1, 3), G(3, -3), H(-5, -3)$

In Exercises 5 and 6, give the most specific name for the quadrilateral. Explain your reasoning.



7. Describe and correct the error in finding the most specific name for the quadrilateral.

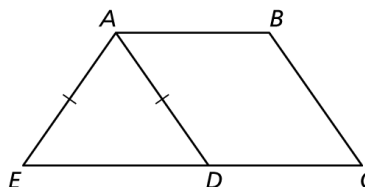
The quadrilateral has two pairs of consecutive congruent sides and the diagonals are perpendicular. So, the quadrilateral is a kite.

8. Use the diagram to write a two-column proof.

Given: $ABCD$ is a parallelogram.

$$\overline{AE} \cong \overline{AD}$$

Prove: $ABCE$ is an isosceles trapezoid.

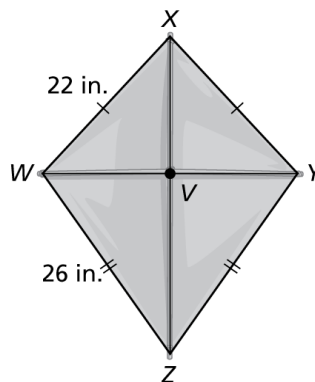


9. The figure shows a window in the shape of a kite.

a. Find $m\angle XVW$.

b. Find \overline{XY} .

c. Which angle is congruent to $\angle XYZ$?



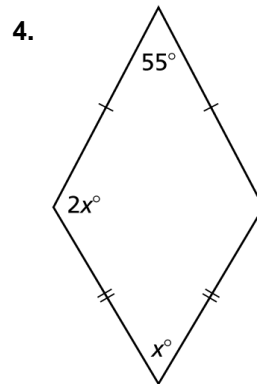
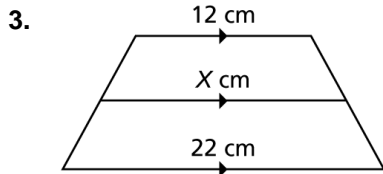
7.5

Practice B

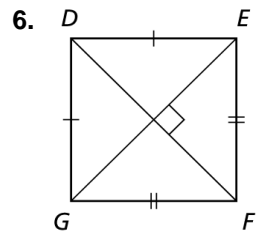
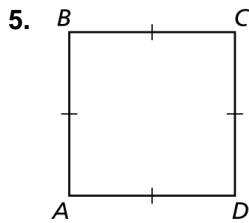
In Exercises 1 and 2, show that the quadrilateral with the given vertices is a trapezoid. Then decide whether it is isosceles.

1. $T(-1, -2), U(-1, 3), V(3, 4), W(3, -3)$ 2. $P(0, 0), Q(2, 4), R(5, 4), S(5, 0)$

In Exercises 3 and 4, find the value of x .



In Exercises 5 and 6, give the most specific name for the quadrilateral. Explain your reasoning.

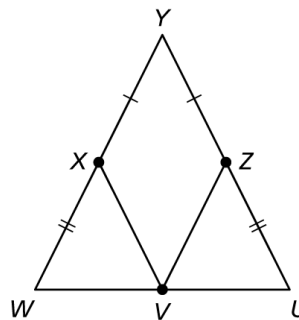


7. Use the diagram to write a two-column proof.

Given: $VXYZ$ is a kite.

$$\overline{XY} \cong \overline{YZ}, \overline{WX} \cong \overline{UZ}$$

Prove: $\triangle WXV \cong \triangle UZV$



8. Three vertices of a trapezoid are given by $(3, -6), (3, -2),$ and $(6, -8)$. Find the fourth vertex such that the trapezoid is an isosceles trapezoid.

9. Is it possible to have a concave kite? Explain your reasoning.

10. The diagram shows isosceles trapezoid $JKLP$ with base lengths a and b , and height c .

- Explain how you know $JKMN$ is a rectangle. Write the area of $JKMN$.
- Write the formula for the area of $\triangle JNP$.
- Write and simplify the formula for the area of trapezoid $JKLP$.

