Name _____ Date _____

1. Determine whether △ABC
or △DEF is similar to △XYZ.
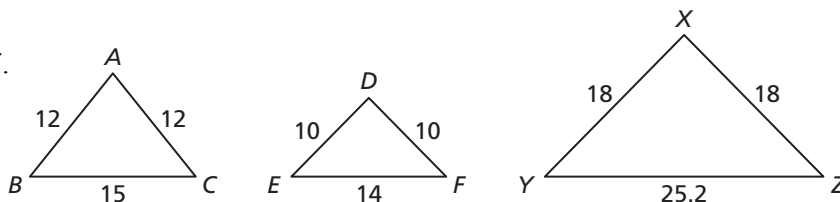
In Exercises 2 and 3, find the value of x that makes △PQR ~ △JKL.

2.

3.
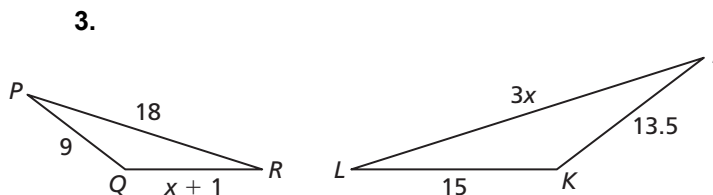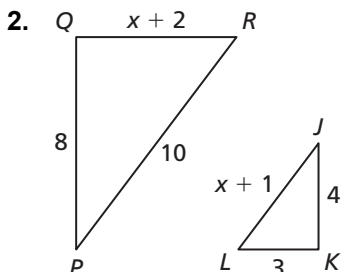
4. Verify that △TUV ~ △XYZ. Find the scale factor of △TUV to △XYZ.

   △TUV: TU = 15, UV = 21, TV = 18   △XYZ: XY = 35, YZ = 49, XZ = 42

**In Exercises 5 and 6, show that the triangles are similar and write a similarity statement.
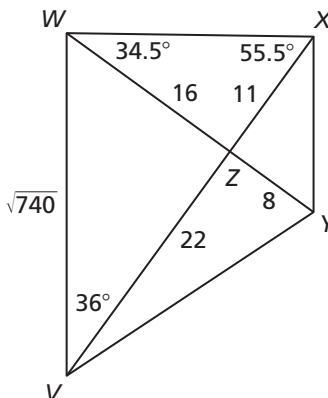Explain your reasoning.**

5.

6.
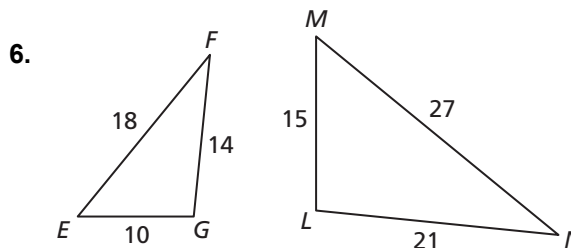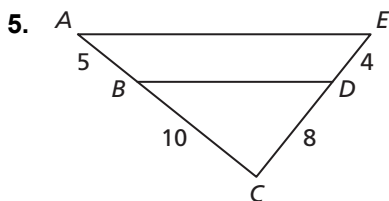
**In Exercises 7–11, use the diagram to
copy and complete the statement.**

7. △VWZ ~ _____   **8.** m∠VZY = _____

9. m∠VWY = _____   **10.** m∠WXY = _____

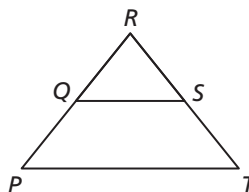**11.** XY = _____

12. In the figure for Exercises 7–11, is
△WXZ ~ △YVZ? Explain your reasoning.

13. Use the figure to write a two-column proof.

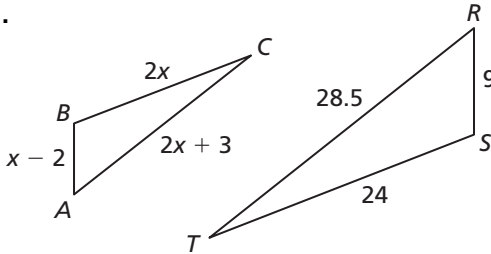   **Given:** $\dfrac{PR}{QR} = \dfrac{TR}{SR}$ **Prove:** $\overline{QS} \parallel \overline{PT}$
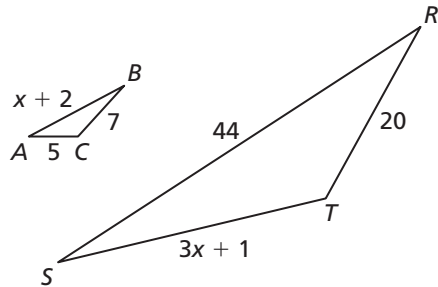
8.3 Practice B

In Exercises 1 and 2, find the value of *x* that makes △*ABC* ~ △*RST*.

1.

2.

3 Verify that △*JKL* ~ △*PQR*. Find the scale factor of △*JKL* to △*PQR*.

△*JKL*: *JK* = 15, *KL* = 30, *JL* = 25   △*PQR*: *PQ* = 12, *QR* = 24, *PR* = 20
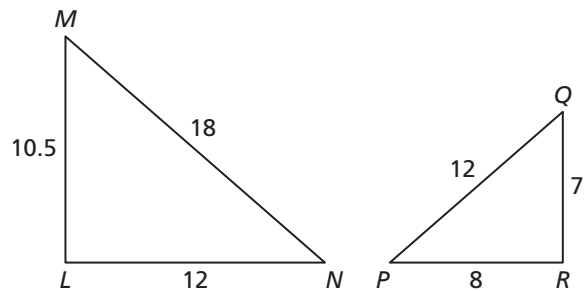
In Exercises 4 and 5, show that the triangles are similar and write a similarity statement. Explain your reasoning.
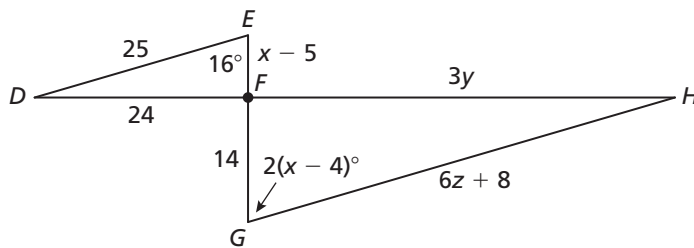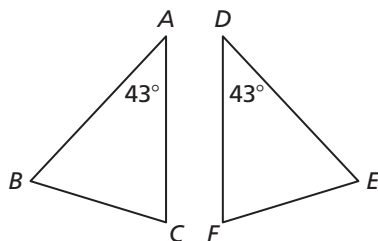
4.
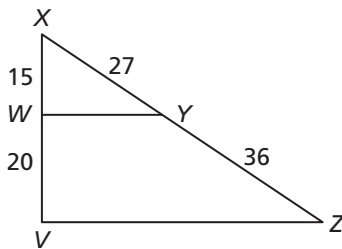
5.

6. △*ABC* has side lengths 42, 21, and 35 units. The shortest side of a triangle similar to △*ABC* is 9 units long. Find the other lengths of the triangle.

7. Use the figure to find the values of *x, y,* and *z* that makes △*DEF* ~ △*GHF*.

Use the figure to write a two-column proof

8. Given: $\dfrac{AC}{DF} = \dfrac{AB}{DE}$ **Prove:** ∠*B* ≅ ∠*E*

9. Given: *LN* = 2*x*

MN = 2*y*

NP = *x*

NQ = *y*

Prove: △*MLN* ~ △*PQN*