Name: _____

Similar Triangles Word Problems

Use similar triangles to solve each problem.

Learn: Set up a proportion with matching sides (like shadow to height), then solve.

Example: A 6 ft tall person casts a 2 ft shadow. At the same time a tree casts a 10 ft shadow. How tall is the tree?

Answer: 30 ft

1. A 8 by 2 rectangle is dilated by a scale factor of 4. What is the area of the new rectangle?

   Answer: _____

2. Triangle ABC ~ triangle DEF. AB = 5, BC = 12, CA = 13 and DE = 20. Find EF and FD.

   Answer: _____

3. A flagpole and a 4 m sign are side by side. The sign's shadow is 16 m and the flagpole's shadow is 48 m. How tall is the flagpole?

   Answer: _____

4. A model car is 1/40 the size of the real car. The model is 7 inches long. How long is the real car in inches?

   Answer: _____

5. A 5 ft tall person casts a 8 ft shadow. At the same time a tree casts a 48 ft shadow. How tall is the tree?

   Answer: _____

6. A 8 by 6 rectangle is dilated by a scale factor of 1/2. What is the area of the new rectangle?

   Answer: _____

7. Triangle ABC ~ triangle DEF. AB = 8, BC = 15, CA = 17 and DE = 32. Find EF and FD.

   Answer: _____

8. A flagpole and a 3 m sign are side by side. The sign's shadow is 16 m and the flagpole's shadow is 48 m. How tall is the flagpole?

   Answer: _____

Name: **ANSWER KEY**

Similar Triangles Word Problems

Use similar triangles to solve each problem.

Learn: Set up a proportion with matching sides (like shadow to height), then solve.

Example: A 6 ft tall person casts a 2 ft shadow. At the same time a tree casts a 10 ft shadow. How tall is the tree?

Answer: 30 ft

1. A 8 by 2 rectangle is dilated by a scale factor of 4. What is the area of the new rectangle?

   Answer: 256 sq units

2. Triangle ABC ~ triangle DEF. AB = 5, BC = 12, CA = 13 and DE = 20. Find EF and FD.

   Answer: EF = 48, FD = 52

3. A flagpole and a 4 m sign are side by side. The sign's shadow is 16 m and the flagpole's shadow is 48 m. How tall is the flagpole?

   Answer: 12 m

4. A model car is 1/40 the size of the real car. The model is 7 inches long. How long is the real car in inches?

   Answer: 280 inches

5. A 5 ft tall person casts a 8 ft shadow. At the same time a tree casts a 48 ft shadow. How tall is the tree?

   Answer: 30 ft

6. A 8 by 6 rectangle is dilated by a scale factor of 1/2. What is the area of the new rectangle?

   Answer: 12 sq units

7. Triangle ABC ~ triangle DEF. AB = 8, BC = 15, CA = 17 and DE = 32. Find EF and FD.

   Answer: EF = 60, FD = 68

8. A flagpole and a 3 m sign are side by side. The sign's shadow is 16 m and the flagpole's shadow is 48 m. How tall is the flagpole?

   Answer: 9 m