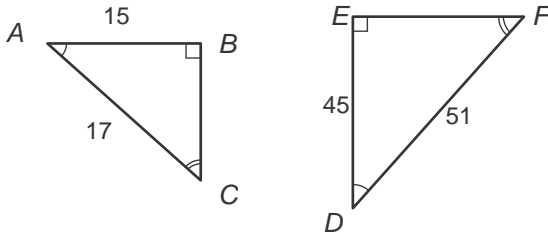


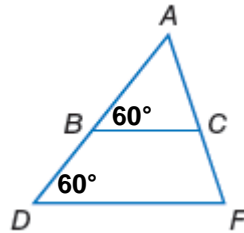
1. A 54,000 gallon water tower is being drained. Eighteen Hundred gallons are drained in the three-quarters of an hour. How many hours will it take to drain the water tower?

2. The triangles are similar. Which series of transformations maps  $\triangle ABC$  onto  $\triangle DEF$ ?



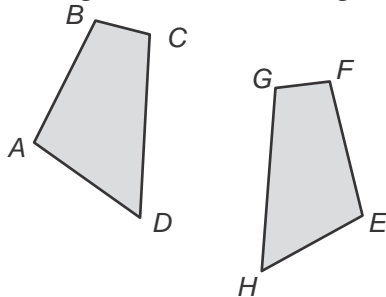
3. The length and width of a rectangle are 10 feet and 7 feet, respectively. A similar rectangle has a width of 42 feet. What is the length of the second rectangle?

4. Are there any similar triangles in the picture shown?



5. Rectangle  $RSTU$  is similar to rectangle  $WXYZ$ . Rectangle  $RSTU$  has a length of 12 units and a perimeter of 36 units. Rectangle  $WXYZ$  has a length of 24 units. What is the perimeter of rectangle  $WXYZ$ ?

6. The figures below are congruent. Which series of transformations maps figure  $ABCD$  onto  $EFGH$ ?



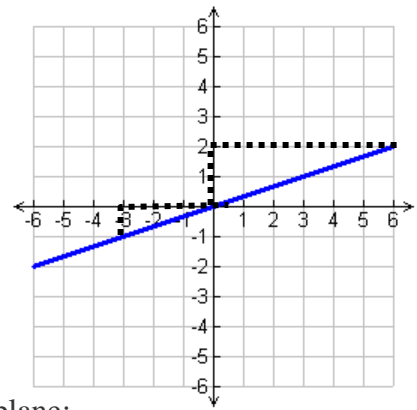
7. State all of the pairs of congruent angles and congruent sides of the triangles if  $\triangle JKL \cong \triangle MNO$ .

8. What are the two slopes shown?

Is each slope the same?

Are the slopes negative?

Are the triangles similar?



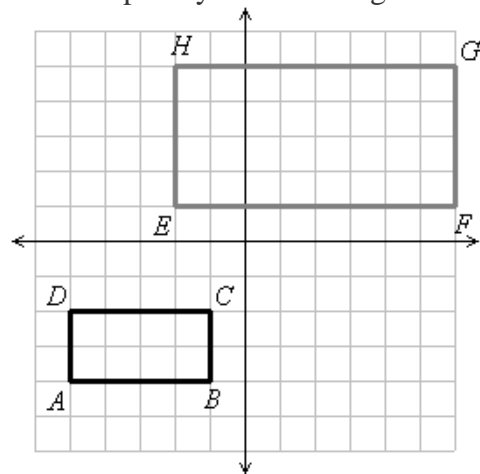
9. Describe the following for any non-vertical line on the coordinate plane:

- The slope triangles made on the on the line.
- The slope between any two distinct points on the line.
- In the slope triangles, the ratios of the rise to the run.

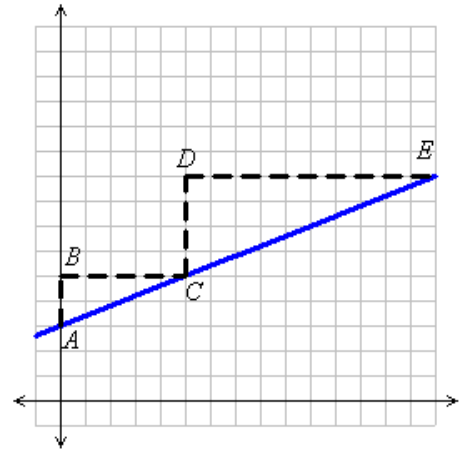
10. Marcus is 84 inches tall and casts a 57 inch shadow. His son, who is standing next to him, casts a 38 inch shadow. How tall is his son?

11. The length of a rectangle is 30 centimeters and the width is 21 centimeters. A similar rectangle has a width of 3.5 centimeters. What is the length of the second rectangle?

12. Determine if the two figures are similar by using transformations. Explain your reasoning.



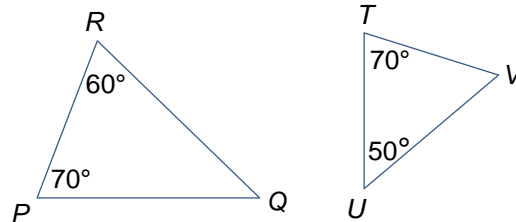
13. Write a proportion comparing the rise to the run for each of the similar slope triangles shown at the right. Then find the numeric value.



14. A flag pole casts a shadow 44.65 feet long. A boy standing next to the statue is 5.5 feet tall and casts a shadow that is 9.4 feet long. How tall is the statue?

15. The length of a rectangle is 54 inches and the width is 12 inches. A similar rectangle has a width of 30 inches. What is the perimeter of the second rectangle?

16. Determine whether the triangles are similar. If so, write a similarity statement.



17. Two rectangles are similar. The length and width of the first rectangle is 9 meters by 11 meters. The second rectangle is similar by a scale factor 6. What is the area of the second rectangle?