**similar figures**

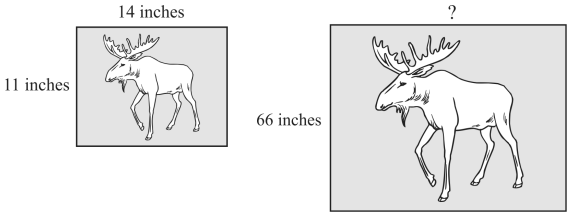
**Name:** _____ **Date:** _____

1. Rachel has to draw two rectangles that are similar to each other. She drew the first rectangle 5 centimeters wide and 6 centimeters long. She drew the second rectangle 10 centimeters wide. How long should she draw the length of the second rectangle?

   A. 11 centimeters B. 12 centimeters

   C. 15 centimeters D. 20 centimeters

2. Hannah designed a rectangular poster for art class as shown below.




   The dimensions of the poster are 11 inches by 14 inches. Hannah wants to make a larger copy of the poster to hang on the wall that is similar to the original poster. She made the width of the larger poster 66 inches.

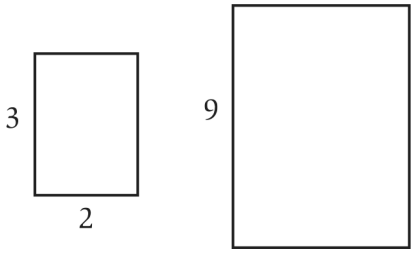
   a) How long is the larger poster in inches? Show all of your work or explain your thinking even if you use mental math.

      Answer: _____ inches

   b) How long is the larger poster in feet and inches? Show all of your work or explain your thinking even if you use mental math.

      Answer: _____ feet
      _____ inches

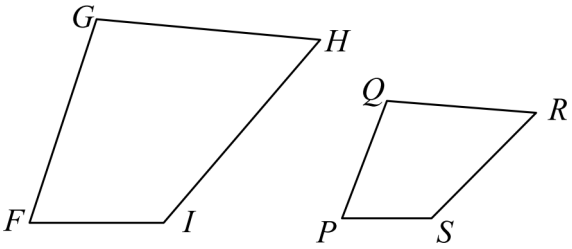
3. Rhonda is enlarging her senior picture. Her original print is a rectangle that is 2 inches wide by 3 inches high. She would like the enlargement to be 9 inches high. How wide will the larger picture be if the two rectangles are similar?




   A. 5 inches B. 6 inches

   C. 8 inches D. 13.5 inches

4. Quadrilateral *FGHI* is similar to quadrilateral *PQRS*.



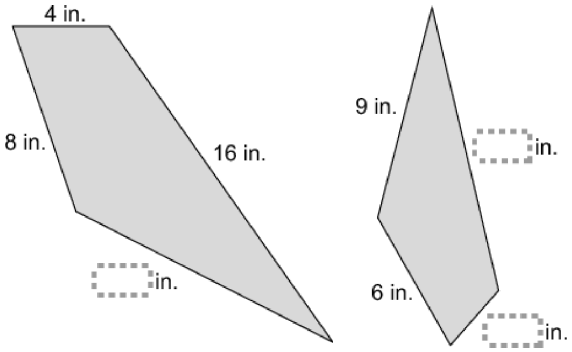

   Which of the following statements is true?

   A. $\angle I \cong \angle Q$ B. $\angle G \cong \angle S$

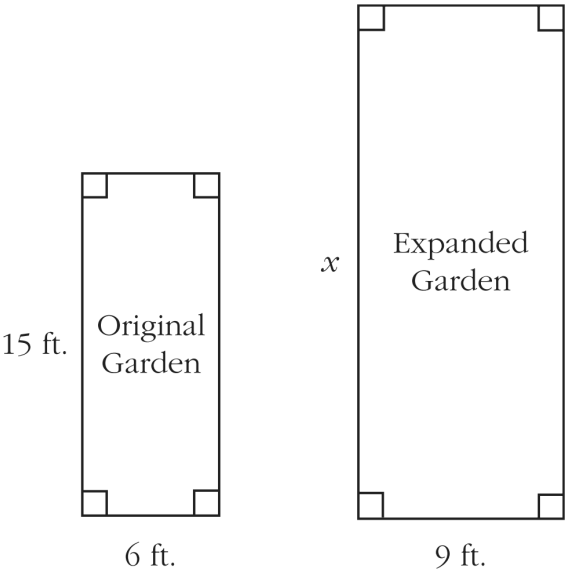
   C. $\angle P \cong \angle G$ D. $\angle H \cong \angle R$

5. Two similar quadrilaterals are shown.

Write numbers in the boxes to label the missing side lengths of both quadrilaterals.



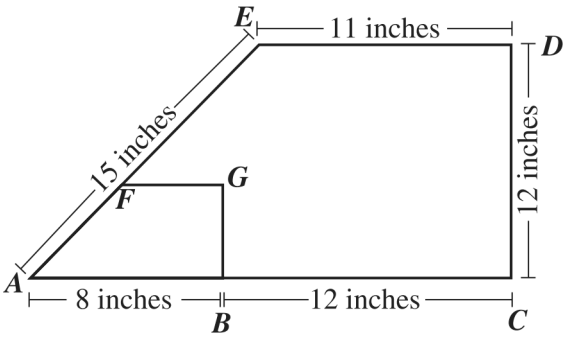

6. The diagram below shows the shape of Robin's original garden and the shape of the garden after it was expanded. The two shapes are similar.




What is the length of the expanded garden ($x$)?

A. 3.6 ft.
B. 10 ft.
C. 18 ft.
D. 22.5 ft.

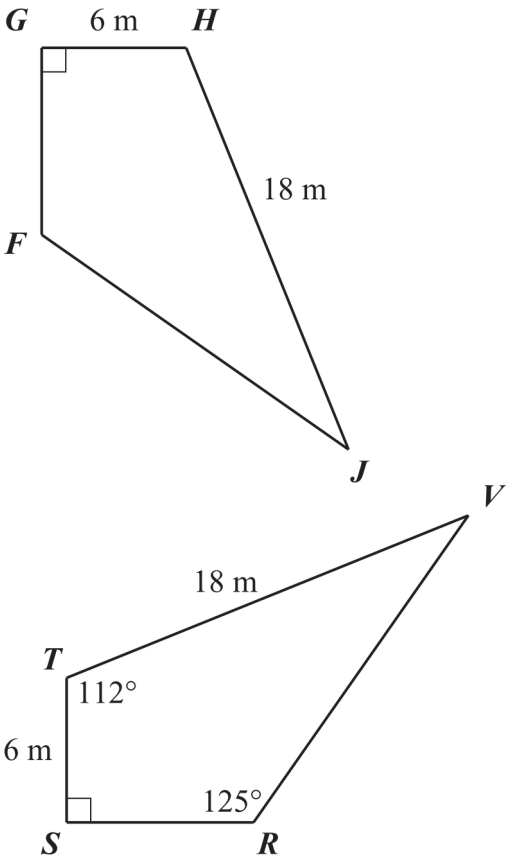
7. In the figure below, quadrilateral $ACDE$ is similar to quadrilateral $ABGF$.




What is the length of $\overline{AF}$?

A. 6.0 inches
B. 6.4 inches
C. 10.0 inches
D. 10.7 inches

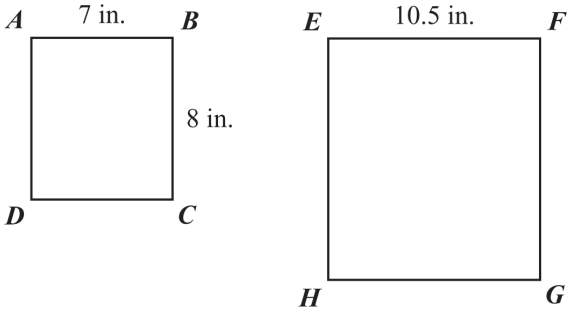
8. In the diagram below, quadrilateral $FGHJ \cong$ quadrilateral $RSTV$.




Based on the measurements in the diagram, what is $m\angle F$?

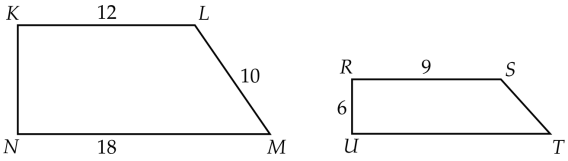
A. 33° B. 90° C. 112° D. 125°

9. Rectangle $ABCD$ is similar to rectangle $EFGH$. The rectangles and some of their dimensions are shown in the diagram below.




Based on the diagram, what is the length, in inches, of side $FG$?

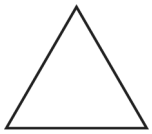
10. In the figure below, trapezoid $KLMN$ is similar to trapezoid $RSTU$.



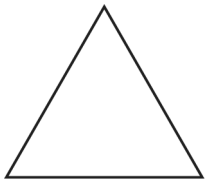

*Note:* The figures are not drawn to scale.

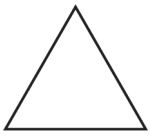
What is the length, in units, of $\overline{ST}$?

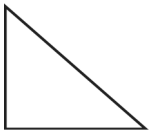
11. Marci drew this shape.



Which shape is similar, but *not* congruent, to Marci's shape?

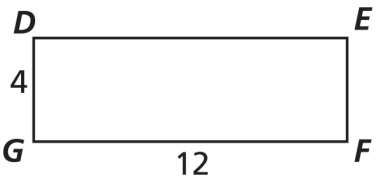
A. 

B. 

C. 

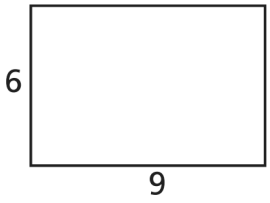
D. 

12. Use the diagram below to answer the following question.

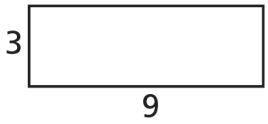



Which of the following rectangles is similar to rectangle *DEFG*?

A. 

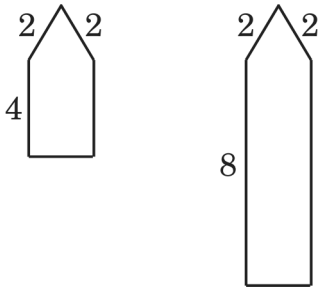

B. 


C. 

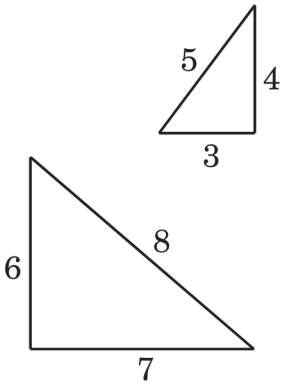

D. 

13. Which pair contains similar figures?

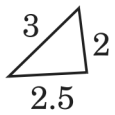
A.

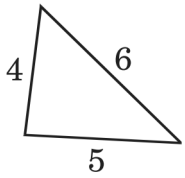



B.

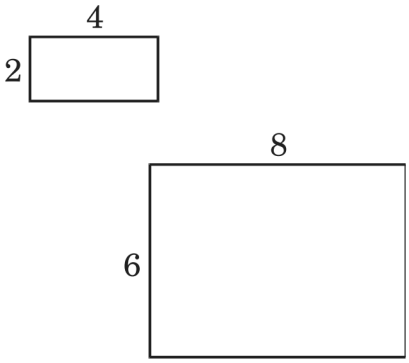



C.

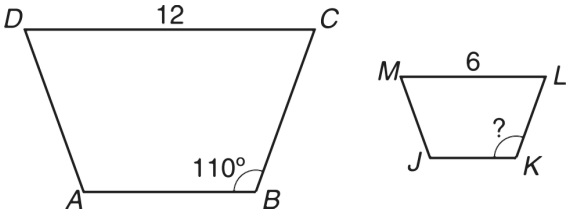



D.



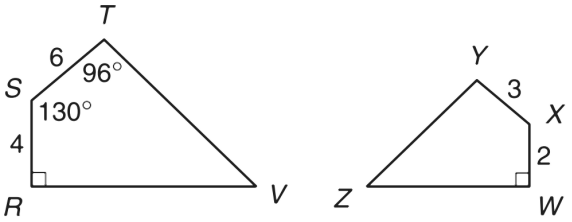

14. Look at this diagram.




Trapezoid *ABCD* is similar to trapezoid *JKLM*. What is the measure of $\angle K$?

A. 55° B. 70° C. 110° D. 140°

15. Quadrilateral *RSTV* is similar to quadrilateral *WXYZ* (quadrilateral *RSTV* $\sim$ quadrilateral *WXYZ*).




not drawn to scale

What is the degree measure of $\angle Y$?

A. 96° B. 90° C. 65° D. 48°

16. Mr. Chang made 2 similar rectangular window frames. One frame was 12 feet wide and 16 feet long. What could be the dimensions of the other frame?

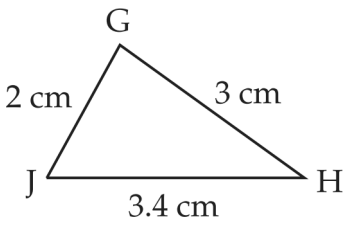
A. 2 feet wide and 6 feet long

B. 6 feet wide and 8 feet long

C. 16 feet wide and 20 feet long

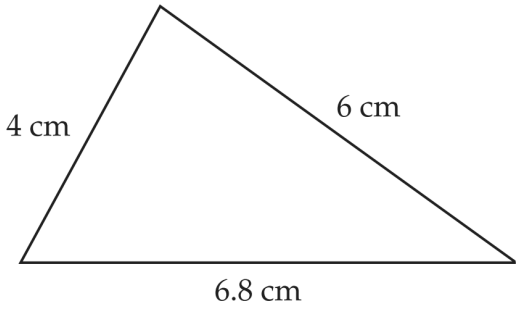
D. 24 feet wide and 48 feet long

17. **Use the triangle below to answer the following question.**

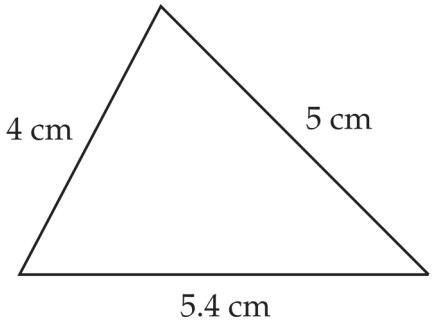



Which triangle is similar to triangle *GHJ*?

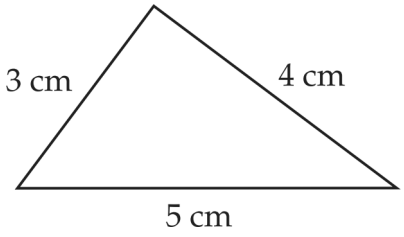
A.



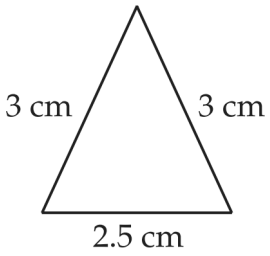

B.



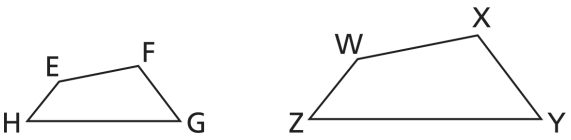

C.




D.



18. Quadrilateral EFGH is similar to quadrilateral WXYZ, as shown below.

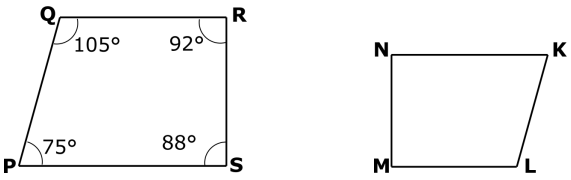



Which side corresponds to side $\overline{FG}$?

A. side $\overline{WX}$ B. side $\overline{WZ}$

C. side $\overline{YZ}$ D. side $\overline{XY}$

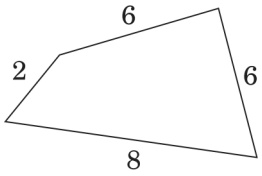
19. Quadrilateral *PQRS* is similar to quadrilateral *KLMN*.




What is the measure of angle *K*?

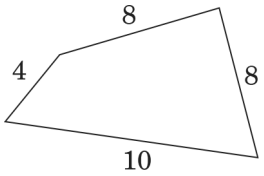
A. 75° B. 88° C. 92° D. 105°

20. A figure is shown below.

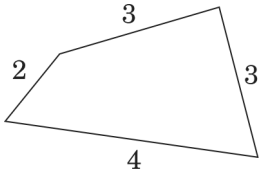



Which of the following is similar to this figure? (The figures are not drawn to scale.)

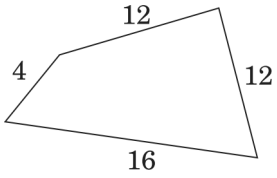
A.



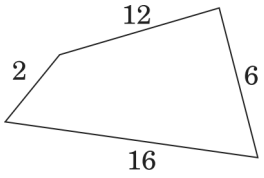

B.




C.




D.




21. Look at the similar figures below.


Note: The figures are not drawn to scale.

What is the length of side P?

A. 48 B. 64 C. 72 D. 96

similar figures 11/19/2014

1.
Answer: B

2.
Answer: A. 84 inches B. 7 feet (0 inches)

3.
Answer: B

4.
Answer: D

5.
Answer: For this item, the response correctly: shows the number 12 placed in the box for the missing side length for the quadrilateral to the left, and the number 12 placed in the upper box and the number 3 placed in the bottom box to show the missing side lengths of the quadrilateral to the right.

6.
Answer: D

7.
Answer: A

8.
Answer: D

9.
Answer: 12 inches

10.
Answer:

11.
Answer: A

12.
Answer: D

13.
Answer: C

14.
Answer: C

15.
Answer: A

16.
Answer: B

17.
Answer: A

18.
Answer: D

19.
Answer: A

20.
Answer:

21.
Answer: D