

7-2 Solve It!

SOLVE IT!

Getting Ready!

A movie theater screen is in the shape of a rectangle 45 ft wide by 25 ft high. Which of the TV screen formats at the right do you think would show the most complete scene from a movie shown on the theater screen? Explain.

Standard

36 in.

Letterbox

36 in.

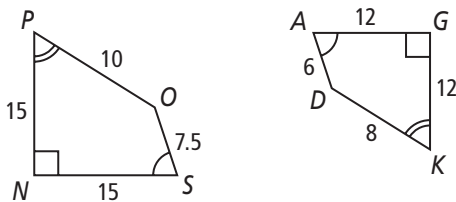
You learned about ratios in the last lesson. Can you use ratios to help you solve the problem?

7-2 Lesson Quiz

1. $\triangle HJK \sim \triangle CND$.

- a. What are the pairs of congruent angles?
- b. What is the extended proportion for the ratios of corresponding sides?

2. Are the polygons similar? If they are, write a similarity statement and give the scale factor.



3. **Do you UNDERSTAND?** Harold has a photograph that is 8 in. \times 10 in. that he wants to print at a reduced size to fit into a frame that is 6 in. tall. What will be the dimensions of the new photograph?

Answers

Solve It!

The letterbox screen has the same ratio of width to height as the movie screen, 9 : 5 in both cases.

Lesson Quiz

1. a. $\angle H \cong \angle C$, $\angle J \cong \angle N$,
 $\angle K \cong \angle D$;
- b. $\frac{HJ}{CN} = \frac{JK}{ND} = \frac{HK}{CD}$

2. yes; $POSN \sim KDAG$, scale factor: 5 : 4

3. 4.8 in. \times 6 in.