

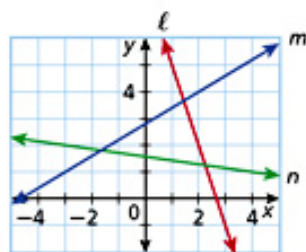
# Chapter 7 Skills Practice

## Lesson

**7-1**

Write a ratio expressing the slope of each line.

- line  $\ell$
- line  $m$
- line  $n$
- The ratio of the side lengths of a quadrilateral is 2:4:5:6, and its perimeter is 85 inches. What is the length of the shortest side?
- The ratio of angle measures in a triangle is 3:10:12. What is the measure of each angle?



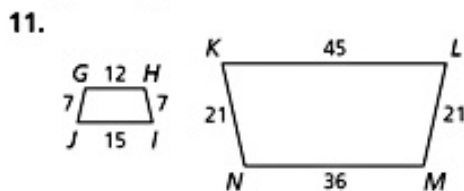
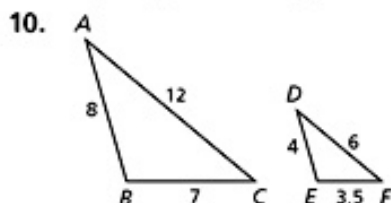
Solve each proportion.

- $\frac{x}{5} = \frac{6}{20}$
- $\frac{x+5}{4} = \frac{9}{x+5}$
- $\frac{21}{9} = \frac{x}{6}$
- Given that  $3x = 12y$ , find the ratio of  $x$  to  $y$  in simplest form.

## Lesson

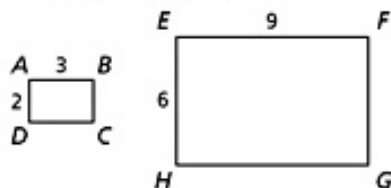
**7-2**

Identify the pairs of congruent angles and corresponding sides.

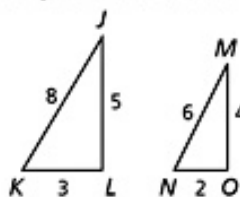


Determine whether the polygons are similar. If so, write the similarity ratio and a similarity statement.

12. rectangles  $ABCD$  and  $EFGH$



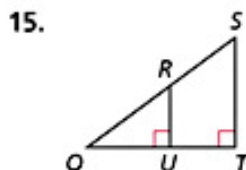
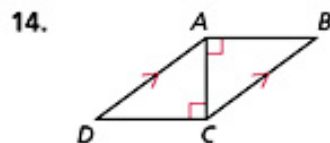
13.  $\triangle JKL$  and  $\triangle MNO$



## Lesson

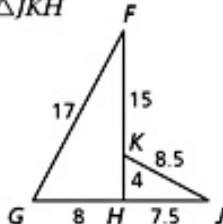
**7-3**

Explain why the triangles are similar and write a similarity statement.



Verify that the triangles are similar.

16.  $\triangle FGH \sim \triangle JKH$

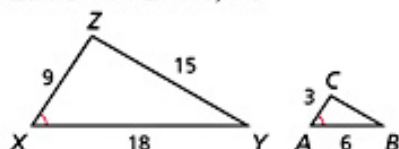


17.  $\triangle ACE \sim \triangle BCD$

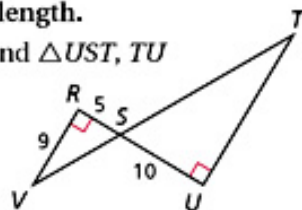


Explain why the triangles are similar and then find each length.

18.  $\triangle XYZ$  and  $\triangle ABC$ ,  $BC$



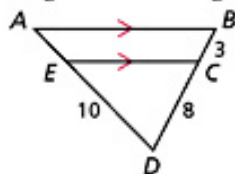
19.  $\triangle RSV$  and  $\triangle UST$ ,  $TU$



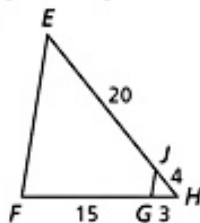
## Lesson

## 7-4

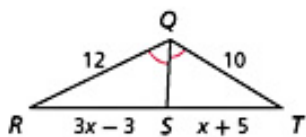
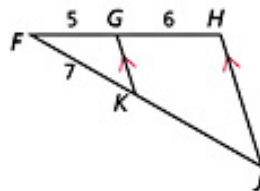
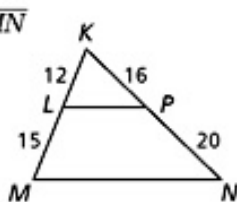
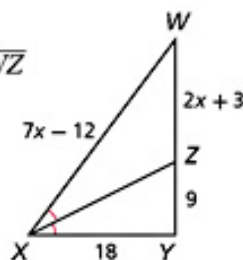
Find the length of each segment.

20.  $\overline{AE}$ 

Verify that the given segments are parallel.

22.  $\overline{EF}$  and  $\overline{JG}$ 

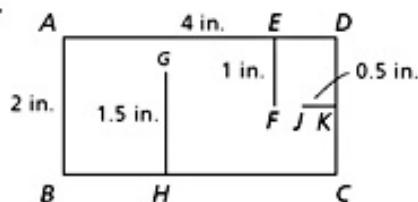
Find the length of each segment.

24.  $\overline{RS}$  and  $\overline{ST}$ 21.  $\overline{KJ}$ 23.  $\overline{LP}$  and  $\overline{MN}$ 25.  $\overline{XW}$  and  $\overline{WZ}$ 

## Lesson

## 7-5

The scale drawing of the playhouse is 1 in.:10 ft. Find the actual lengths of the following walls.

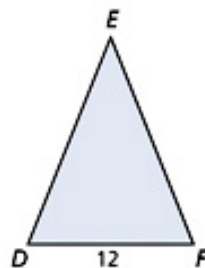
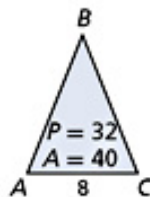
26.  $\overline{GH}$ 27.  $\overline{EF}$ 28.  $\overline{DC}$ 

The school courtyard is 25 ft by 40 ft. Make a scale drawing of the courtyard using the following scales.

29. 1 cm:1 ft

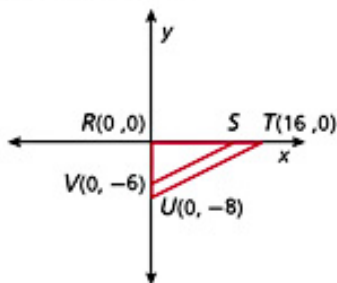
30. 1 cm:5 ft

31. 1 cm:10 ft

32. Given that  $\triangle ABC \sim \triangle DEF$ , find the perimeter  $P$  and area  $A$  of  $\triangle DEF$ .

## Lesson

## 7-6

33. Given that  $\triangle RSV \sim \triangle RTU$ , find the coordinates of  $S$  and the scale factor.34. Given:  $A(-3, 3)$ ,  $B(1, 7)$ ,  $C(5, 5)$ ,  $D(-1, 5)$ ,  $E(1, 4)$   
Prove:  $\triangle ABC \sim \triangle ADE$