

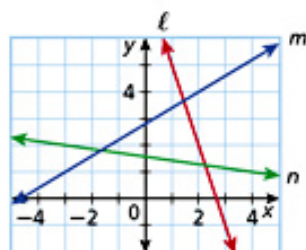
Chapter 7 Skills Practice

Lesson

7-1

Write a ratio expressing the slope of each line.

- line ℓ
- 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?



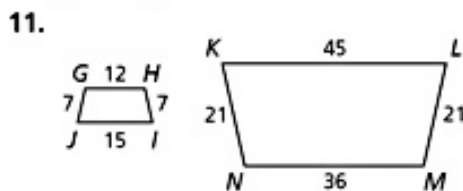
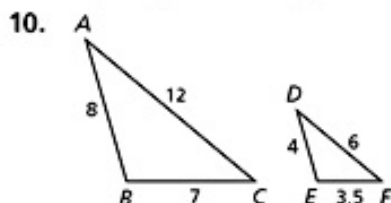
Solve each proportion.

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

Lesson

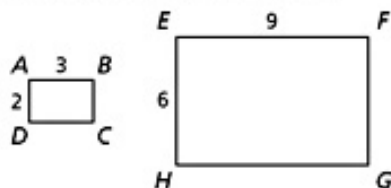
7-2

Identify the pairs of congruent angles and corresponding sides.

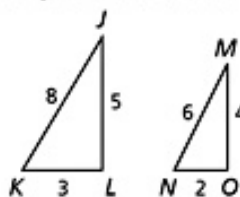


Determine whether the polygons are similar. If so, write the similarity ratio and a similarity statement.

12. rectangles $ABCD$ and $EFGH$



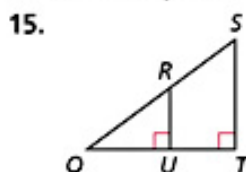
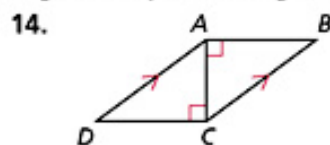
13. $\triangle JKL$ and $\triangle MNO$



Lesson

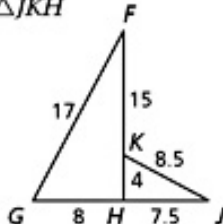
7-3

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



Verify that the triangles are similar.

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

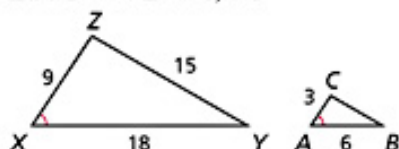


17. $\triangle ACE \sim \triangle BCD$

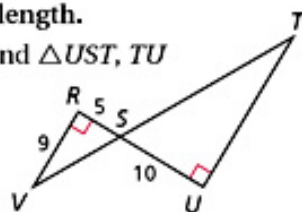


Explain why the triangles are similar and then find each length.

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



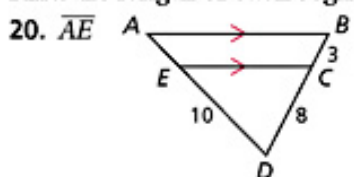
19. $\triangle RSV$ and $\triangle UST$, TU



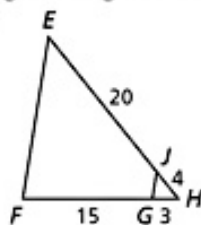
Lesson

7-4

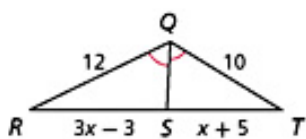
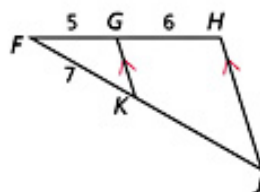
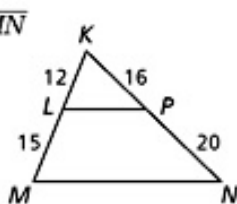
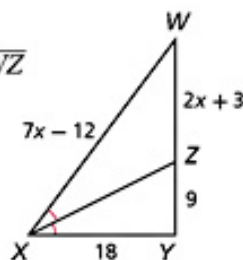
Find the length of each segment.



Verify that the given segments are parallel.

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

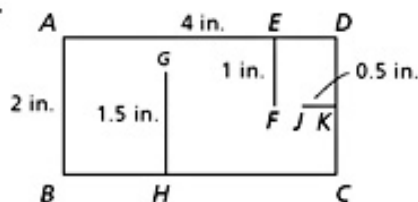
Find the length of each segment.

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.

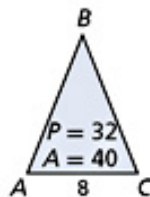
26. \overline{GH} 27. \overline{EF} 28. \overline{DC} 

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

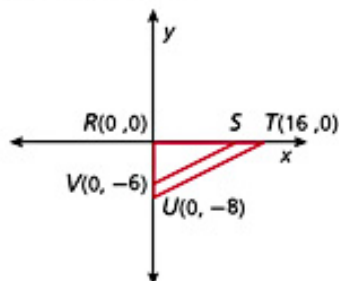
30. 1 cm:5 ft

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: $\triangle ABC \sim \triangle ADE$