Ch 9 Quiz Review (9.1-9.4)

1 In Logan's high school, there are 190 teachers and 2,650 students. What is the approximate student-teacher ratio at his school?

2 The ratio of goats to sheep at a university research farm is 4:7. The number of sheep at the farm is 28. What is the number of goats?

3 Out of a survey of 1000 households, 460 had at least one dog or cat as a pet. What is the ratio of pet owners to households?

4 The ratio of male students to female students in the drama club at Campbell High School is 3:4. If the number of male students in the club is 18, predict the number of female students.

5 Myra is playing a board game. After 12 turns, Myra has landed on a blue space 3 times. If the game will last for 100 turns, predict how many times Myra will land on a blue space.

Solve each proportion.

6 $\dfrac{2x+5}{10} = \dfrac{42}{20}$

7 $\dfrac{x-3}{3} = \dfrac{5}{8}$

8 $\dfrac{3x-1}{4} = \dfrac{2x+4}{5}$

9 $\dfrac{2x+3}{3} = \dfrac{6}{x-1}$

Find the measure of the sides or angles of the given shapes.

10 The ratio of the measure of the three angles of a triangle is 6:9:10. Find the measure of the largest angle.

11 The ratio of the measures of three sides of a triangle is 2:5:4, and its perimeter is 165 units. Find the measure of each side of the triangle.

12 The ratio of the measures of three angles of a triangle is 4:6:8. Find the measure of each angle of the triangle.

13 The perimeter of a rectangle is 40 yards. The ratio of its length to its width is 3:7. Find the area of the rectangle.
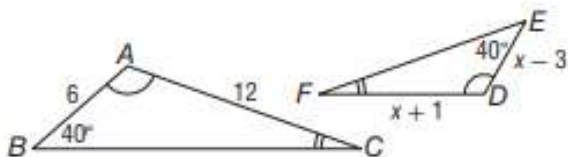
Determine whether each pair of figures is similar. If so, write the similarity statement and scale factor. If not, explain your reasoning.
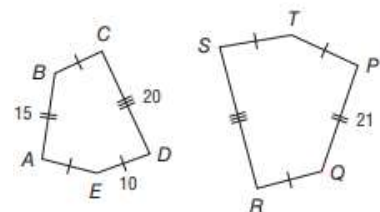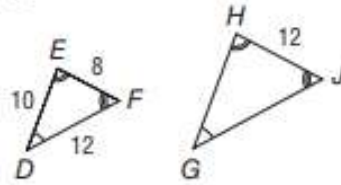
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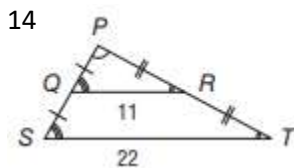
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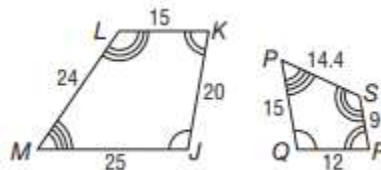
**16 Each pair of polygon is similar. Find the value of x.**

17 **PENTAGONS** If $ABCDE \sim PQRST$, find the scale factor of $ABCDE$ to $PQRST$ and the perimeter of each polygon.

18 If $\triangle DEF \sim \triangle GHJ$, find the scale factor of $\triangle DEF$ to $\triangle GHJ$ and the perimeter of each triangle.
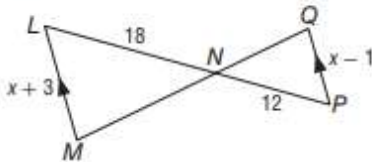

Determine whether the triangles are similar. If so, write a similarity statement. If not, what would be sufficient to prove the triangles similar? Explain your reasoning.
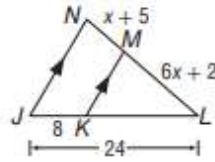
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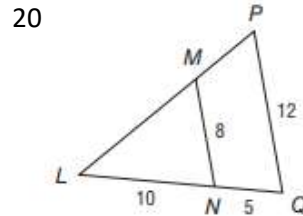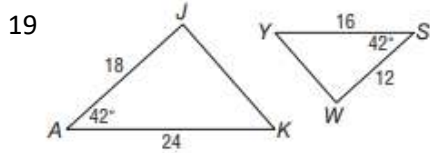
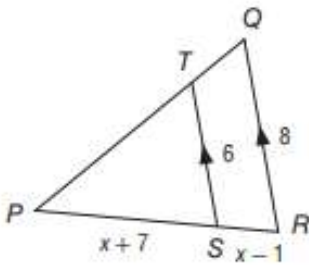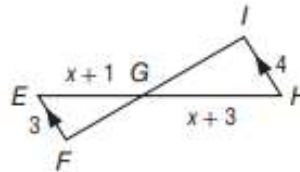**ALGEBRA** Identify the similar triangles. Then find each measure.

21 . LM, QP

22 NL, ML
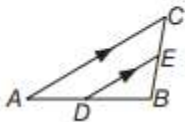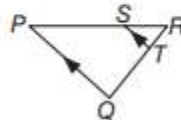

23 PS, PR

24 . EG, HG

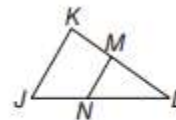**25** . If $AD = 24$, $DB = 27$, and $EB = 18$, find CE.

26 If $QT = x + 6$, $SR = 12$, $PS = 27$, and $TR = x - 4$, find QT and TR.

Determine whether $\overline{JK} \parallel \overline{NM}$. Justify your answer.
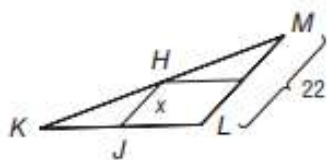
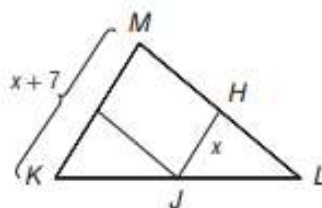**27** . $JN = 18$, $JL = 30$, $KM = 21$, and $ML = 35$

28 $KM = 24$, $KL = 44$, and $NL = \dfrac{5}{6} JN$

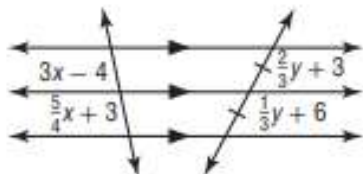$\overline{JH}$ is a midsegment of $\triangle KLM$. Find the value of x.

29

30

31 Find x and y.

$3x - 4$
$\frac{5}{4}x + 3$
$\frac{2}{3}y + 3$
$\frac{1}{3}y + 6$

32 . Find x and y.

$\frac{4}{3}y + 2$
$4y - 4$
$3x - 4$
$x + 1$