## 7.1 Proportions & Ratios

What is the ratio of boys to girls in this class?

What is the ratio of girls to students in this class?

To solve a proportion, \_\_\_\_\_

Ex1. Solve

 $\frac{4x-5}{3} = -\frac{26}{6}$ 

**Ex2.** In a triangle, the ratio of measures of 3 sides is 5:12:13 and the perimeter is 90 in. Find the measure of the shortest side.

## 7.2 Similar Figures

Similar Figures have same	, but may be different
Similar figures must have: 1)	corresponding angles AND
2) sides that are	(same).
The ratio of sides is called the	·
Are congruent figures also similar?	
<u>Ex 2:</u> Determine if the triangles are similar.	S
Are corresponding angles equal?	B 3.9 80° 5.25
Are corresponding sides proportional?	$A \xrightarrow{60^{\circ}}{8} C \xrightarrow{7} R \xrightarrow{40^{\circ}}{6} T$

Similarity statement:

a). Find x.

 $\begin{array}{c}
B \\
14 \\
A \\
10 \\
D
\end{array}
\begin{array}{c}
G \\
H \\
x-3 \\
E
\end{array}
\begin{array}{c}
F \\
x+5 \\
E
\end{array}$ 

b). Find the scale factor.

c). Find GF.

**Ex4** Rectangle QRST is similar to rectangle JKLM with a scale factor of 1.5. If the length and width of rectangle QRST are 10 cm and 4cm, what are the length and width of rectangle JKLM?