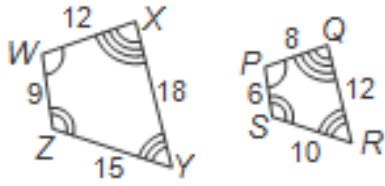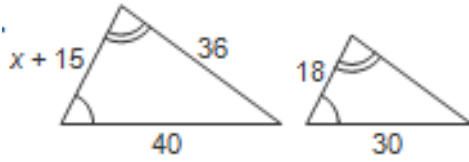# 7.1 to 7.3 Review

1. In the 2007 Major League Baseball season, Alex Rodrigues hit 54 homeruns and was at bat 583 times. What is the ratio of home runs to the number of times he was at bat?

2. There are 182 girls in the sophomore class of 305 students. What is the ratio of boys to total students?

3. The ratio of the sides of a triangle is 8:15:17. Its perimeter is 480 inches. Find the length of each side of the triangle.

4. The ratio of the measures of the three angles of a triangle is 7:9:20. Find the measure of each angle of the triangle.

5. Solve $\dfrac{2x+3}{8} = \dfrac{5}{4}$.

6. Bryon is measuring plants in a field for a science project. Of the first 25 plants he measures, 15 of them are smaller than a foot in height. If there are 4000 plants in the field, predict the total number of plants smaller than a foot in height.
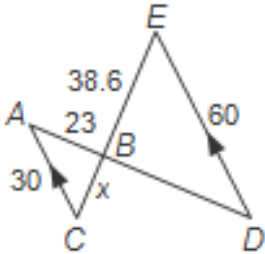
7. Determine whether the pair of figures is similar. If so, write the similarity statement and scale factor. Explain your reasoning.
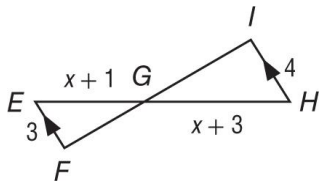

8. The following polygons are similar. Find the value of x.

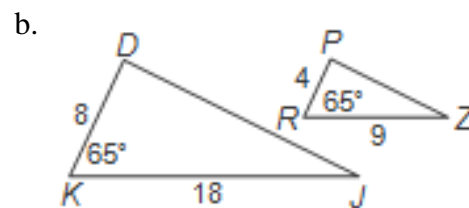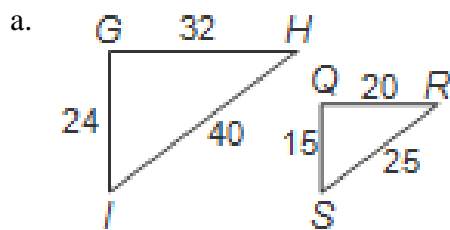9. Identify the similar triangles. Then find the length of BC.

10. Identify the similar triangles. Then find the length of QR.

11. The heights of two vertical posts are 2 meters and 0.45 meter. When the shorter post casts a shadow that is 0.85 meters long, what is the length of the longer post's shadow to the nearest hundredth?

12. Determine whether the triangles are similar. If so, write a similarity statement. Explain your reasoning.

    a.

G 32 H
24   40 Q 20 R
15   25
I S

    b.

D P
8   4   65° R Z
65°   9
K 18 J

13. Find the value of x.

    a.

20   18
x 9

    b.

x 11   33
$x + 12$