8.3 Proving Triangle Similarity by SSS and SAS

1. Which triangle does not belong with the other three? Explain your reasoning.
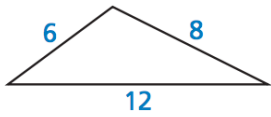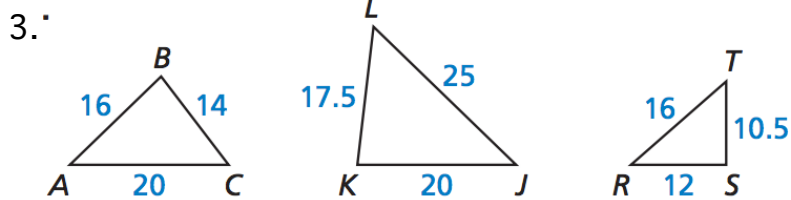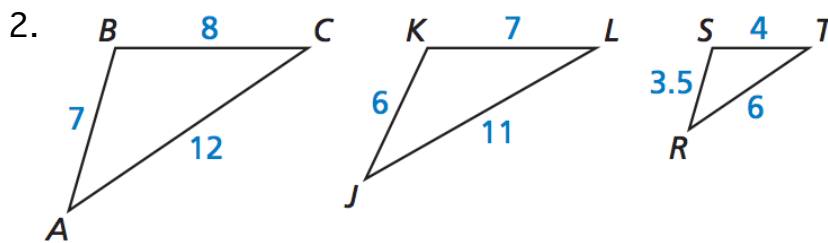
6   8
12

6
4   3

9   12
18

8
4   6

Determine whether ΔJKL or ΔRST is similar to ΔABC.

2.   B   8   C   K   7   L   S 4 T
     7   6   3.5   6
          12   11   R
     A   J

3.
        B   L   T
    16   14   17.5   25   16   10.5
    A   20   C   K   20   J   R   12   S
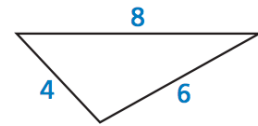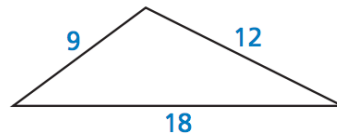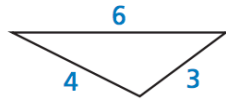
Find the value of x that makes $\Delta DEF \sim \Delta XYZ$.

4.
                                  Y
     5   E   2x − 1   10   14
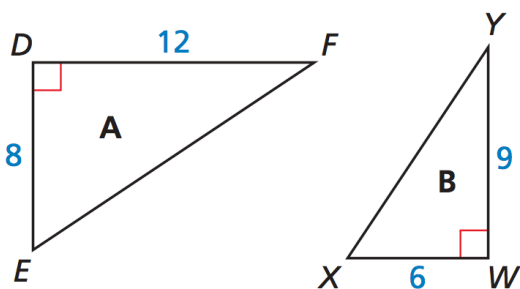   D   11   F X   5x + 2   Z
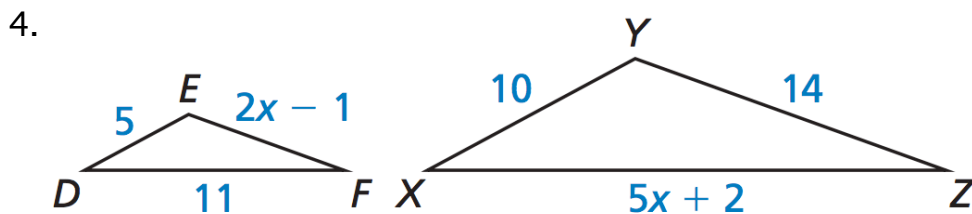
5.
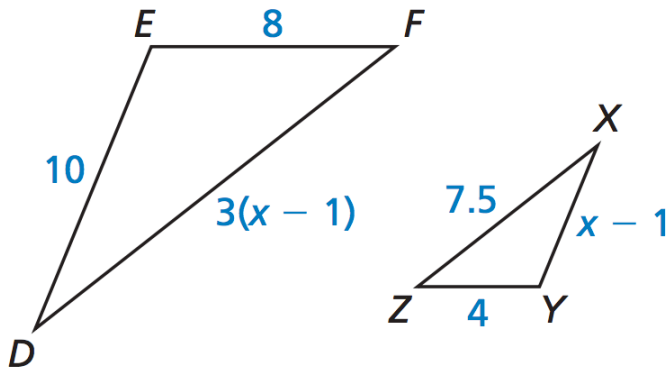
Verify that $\triangle ABC \sim \triangle DEF$. Find the scale factor of $\triangle ABC$ to $\triangle DEF$.

6. $\triangle ABC$: $BC = 18$, $AB = 15$, $AC = 12$
       $\triangle DEF$: $EF = 12$, $DE = 10$, $DF = 8$

7. $\triangle ABC$: $AB = 10$, $BC = 16$, $CA = 20$
       $\triangle DEF$: $DE = 25$, $EF = 40$, $FD = 50$

Determine whether the two triangles are similar. If they are similar, write a similarity statement and find the scale factor of triangle B to triangle A.

8.

9.