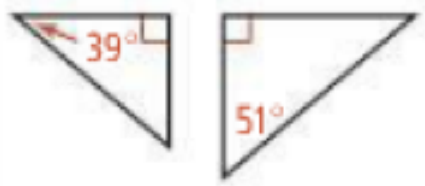
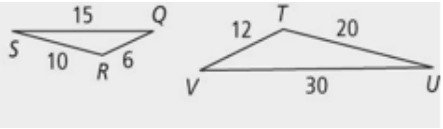
**7.9 Classwork: Similarity ratio problems**

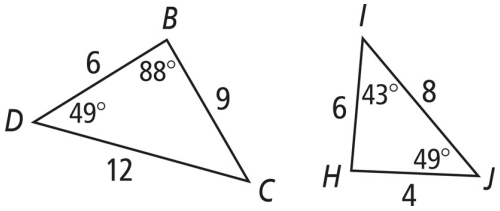
1. Are the two triangles similar? Explain how you know and be sure to name the postulate or theorem if applicable.



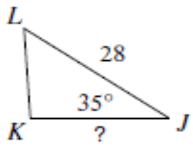

2. Are the two triangles similar? Explain how you know and be sure to name the postulate or theorem if applicable.

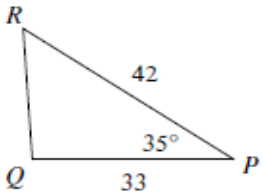



3. Name the three ways (postulates or theorems) to prove these two triangles similar and use the numbers to justify.

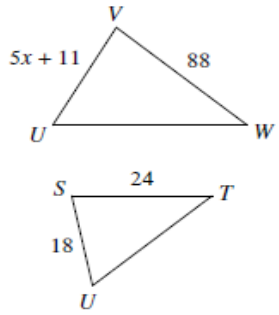



4. Solve for side KJ.



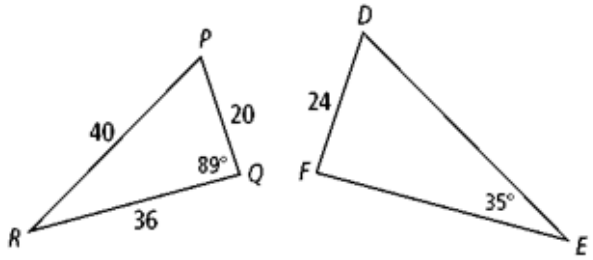



5. Solve for x.

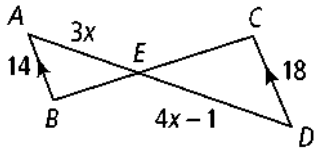



6. In the diagram below, $\Delta PRQ \sim \Delta DEF$. Find each of the following.

1. the scale factor of $\Delta PRQ$ to $\Delta DEF$
2. $m\angle D$
3. $m\angle R$
4. $m\angle P$
5. $DE$
6. $FE$




7. Solve for x.

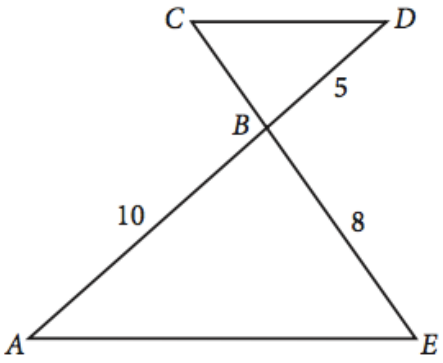


**8.** A cubical block of metal weighs 6 pounds. How much will another cube of the same metal weigh if its sides are twice as long?

A. 48 B. 32 C. 24 D. 18 E. 12

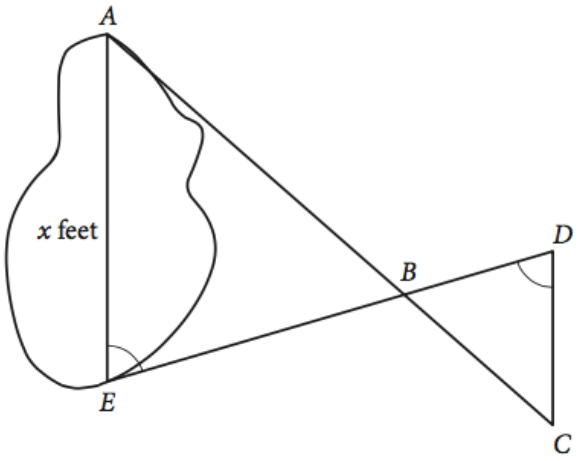
## Similarity SAT Problems

**18**

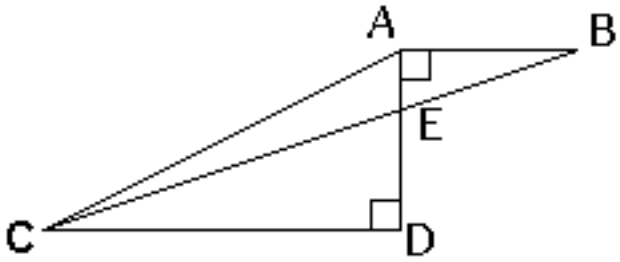



In the figure above, $\overline{AE} \parallel \overline{CD}$ and segment $AD$ intersects segment $CE$ at $B$. What is the length of segment $CE$?

**17**




A summer camp counselor wants to find a length, $x$, in feet, across a lake as represented in the sketch above. The lengths represented by $AB$, $EB$, $BD$, and $CD$ on the sketch were determined to be 1800 feet, 1400 feet, 700 feet, and 800 feet, respectively. Segments $AC$ and $DE$ intersect at $B$, and $\angle AEB$ and $\angle CDB$ have the same measure. What is the value of $x$ ?




**9.** In the figure above AD = 4, AB = 3 and CD = 9. What is the area of triangle AEC ?