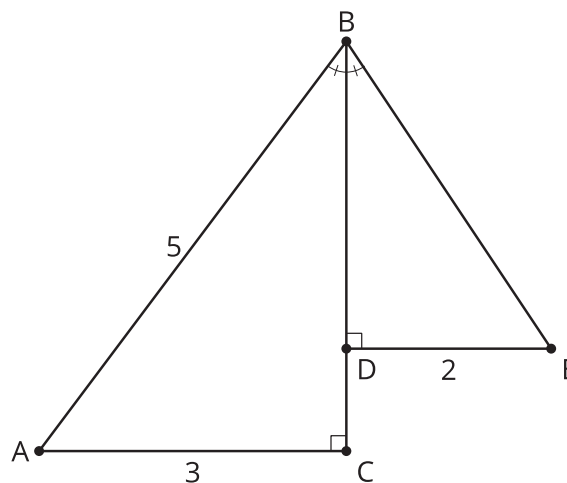# Lesson 15 Practice Problems

1. In the right triangles shown, the measure of angle $ABC$ is the same as the measure of angle $EBD$. What is the length of side $BE$?

2. In right triangle $ABC$, angle $C$ is a right angle, $AB = 13$, and $BC = 5$. What is the length of $AC$?

3. In this diagram, lines $AC$ and $DE$ are parallel, and line $DC$ is perpendicular to each of them. What is a reasonable estimate for the length of side $BE$?

$AC \parallel DE,\ DC \perp DE,\ DC \perp AC$
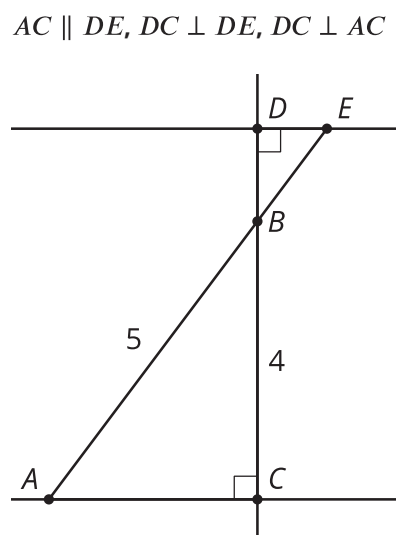
A. $\frac{1}{3}$

B. 1

C. $\frac{5}{3}$

D. 5

4. Select **all** of the right triangles.

   A. Triangle $ABC$ with $AB = 30$, $BC = 40$, and $AC = 50$

   B. Triangle $XYZ$ with $XY = 1$, $YZ = 1$, and $XZ = 2$

   C. Triangle $EFG$ with $EF = 8$, $FG = 15$, and $EG = 17$

   D. Triangle $LMN$ with $LM = 7$, $MN = 24$, and $LN = 25$

   E. Triangle $QRS$ with $QR = 4$, $RS = 5$, and $QS = 6$
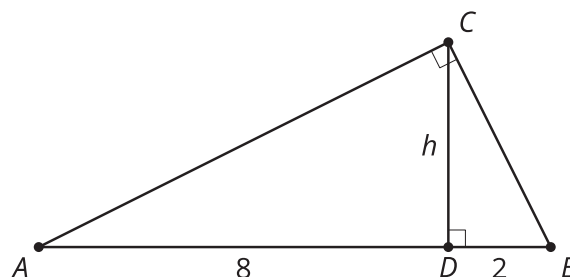
   (From Unit 3, Lesson 14.)

5. Andre says he can find the length of the third side of triangle $ABC$ and it is 13 units. Mai disagrees and thinks that the side length is unknown. Who do you agree with? Show or explain your reasoning.
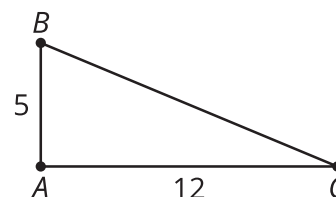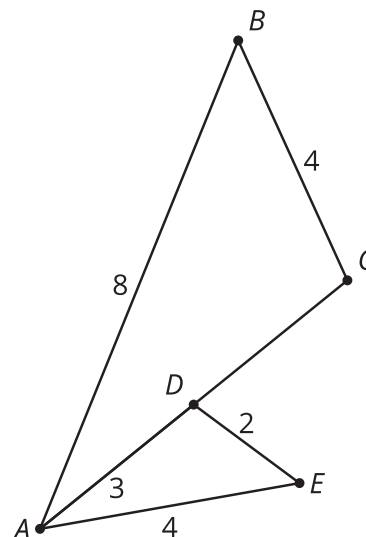
   (From Unit 3, Lesson 14.)

6. In right triangle $ABC$, altitude $CD$ with length $h$ is drawn to its hypotenuse. We also know $AD = 8$ and $DB = 2$. What is the value of $h$?

   (From Unit 3, Lesson 13.)

7. Select the sequence of transformations of $AC = 6$
   triangle $ADE$ that would show that
   triangles $ABC$ and $AED$ are similar. The
   length of $AC$ is 6.



A. Dilate from center $A$ by a scale factor of 2, then reflect over line $AC$.

B. Dilate from center $A$ by a scale factor of 2, then rotate 60º around angle $A$.

C. Translate by directed line segment $DC$, then reflect over line $AC$.

D. Dilate from center $A$ by a scale factor of 4, then reflect over line $AC$.

(From Unit 3, Lesson 7.)