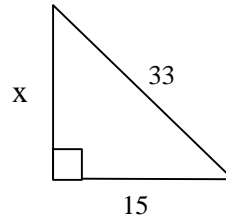




7) What is the value of  $x$ ? If necessary, round your answer to two decimal places.



8) True or False? Two right triangles are similar if at least one acute angle of one triangle is congruent to an acute angle of the other triangle.

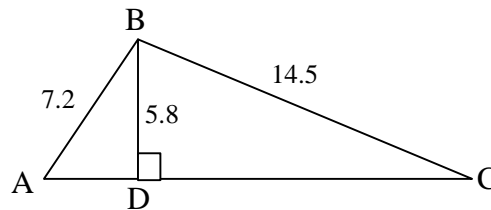
9) Which of the following are Pythagorean triples? Circle all that apply.

- A. 45, 45, 90      B. 16, 30, 34      C. 64, 120, 136  
D. 12, 15, 17      E. 30, 72, 78      F. 2, 3, 4

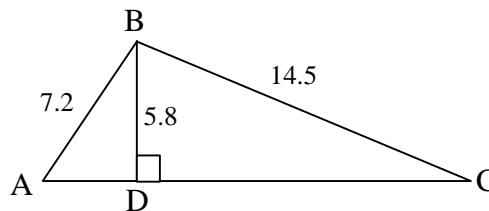
10) The HL congruence theorem for right triangles is really just a special case of which of the following triangle congruence theorems?

- A. SSS      B. SAS      C. ASA      D. AAS

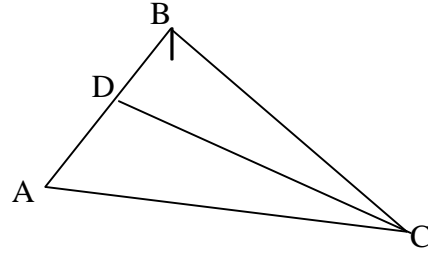
11) Given that  $\overline{BD} \perp \overline{AC}$ , what is the length of  $\overline{AC}$ ? Round your answer to two decimal places.



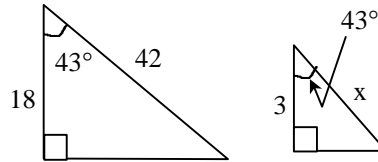
12) What is the area of  $\triangle ABC$  below? If necessary, round your answer to two decimal places.



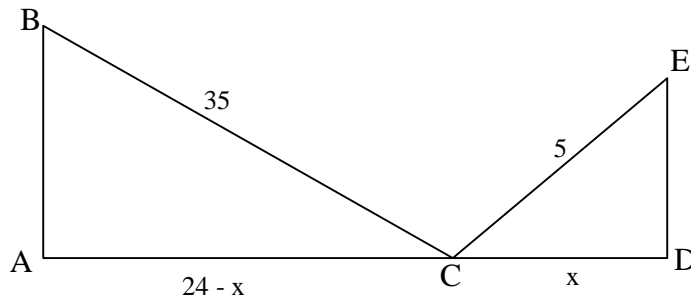
13) True or False?  $\triangle ADC \sim \triangle BDC \sim \triangle ABC$ .



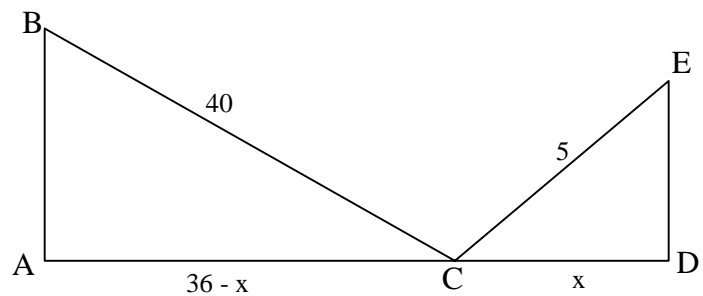
14) Use the diagram below to solve for  $x$ . Round your answer to two decimal places.



15) Given that  $\triangle ABC \sim \triangle DEC$ , find the value of  $x$ . Round your answer to two decimal places.



16) Given that  $\triangle ABC \sim \triangle DEC$ , find the value of  $x$ . Round your answer to two decimal places.



17) A  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle has a hypotenuse of length 11. What is the length of one of its legs? If necessary, round your answer to two decimal places.

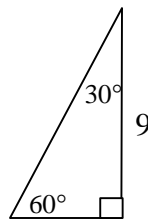
18) Fill in the blank. If the shortest leg of a  $30^\circ$ -  $60^\circ$ -  $90^\circ$  triangle has length 4, the length of the hypotenuse is \_\_\_\_\_.

19) In the triangle below, what is the length of the side opposite the  $30^\circ$  angle?

A.  $2\sqrt{3}$

B.  $\sqrt{3}$

C.  $3\sqrt{3}$



20) The hypotenuse of a  $30^\circ$ -  $60^\circ$ -  $90^\circ$  triangle has length 16. What is the length of the side opposite the  $60^\circ$  angle? If necessary, round your answer to two decimal places.

21) Which of the following ratios correctly describes the tangent function?

A.  $\frac{\text{Opp}}{\text{Adj}}$

B.  $\frac{\text{Opp}}{\text{Hyp}}$

C.  $\frac{\text{Adj}}{\text{Hyp}}$

22) What is  $\sin 30^\circ$ ?

A.  $\frac{1}{2}$

B.  $\frac{1}{\sqrt{2}}$

C.  $\frac{1}{\sqrt{3}}$

D. 1

E.  $\frac{\sqrt{3}}{2}$

F.  $\sqrt{3}$

23) What is  $\tan 60^\circ$ ?

A.  $\frac{1}{2}$

B.  $\frac{1}{\sqrt{2}}$

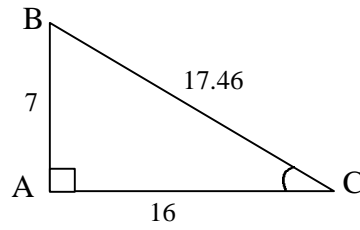
C.  $\frac{1}{\sqrt{3}}$

D. 1

E.  $\frac{\sqrt{3}}{2}$

F.  $\sqrt{3}$

24) What is  $\cos C$ ? If necessary, round your answer to two decimal places.



25) In the diagram below,  $\overline{BC}$  is an altitude of  $\triangle ABD$ . What is the length of  $\overline{CD}$ ? If necessary, round your answer to two decimal places.

