

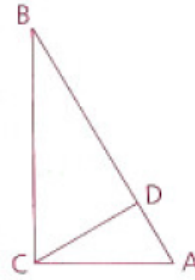
**Honors Geometry- Pythagorean Theorem, Distance Formula,  
and Altitude-on-Hypotenuse Theorems Review**

Name: \_\_\_\_\_

P: \_\_\_\_\_

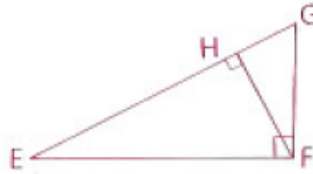
1) Given:  $\overline{AC} \perp \overline{CB}$ ,  $\overline{CD} \perp \overline{AB}$

- a If  $AD = 4$  and  $BD = 9$ , find  $CD$ .
- b If  $AD = 4$  and  $AB = 16$ , find  $AC$ .
- c If  $BD = 6$  and  $AB = 8$ , find  $BC$ .
- d If  $CD = 8$  and  $BD = 16$ , find  $AD$ .
- e If  $AD = 3$  and  $BD = 24$ , find  $AC$ .
- f If  $BC = 8$  and  $BD = 20$ , find  $AB$ .

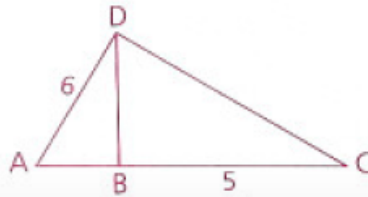


2) a) If  $HG = 4$  and  $EF = 3\sqrt{5}$ , find  $EH$ .

b) If  $GF = 6$  and  $EH = 9$ , find  $EG$ .



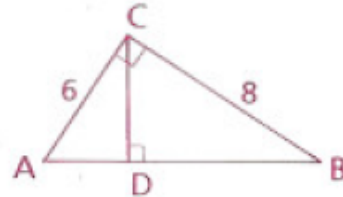
3) Given:  $\overline{AD} \perp \overline{CD}$ ,  
 $\overline{BD} \perp \overline{AC}$ ,  
 $BC = 5$ ,  $AD = 6$   
Find:  $BD$



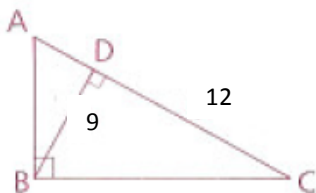
4) Find the altitude (length of a segment perpendicular to both bases) of an isosceles trapezoid shown.



5) Find  $CD$ .



6) Find  $AD$  and  $BC$ .



7) The point  $(5, y)$  is equidistant from  $(1, 4)$  and  $(10, -3)$ .  
Find  $y$ .