

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Hour: \_\_\_\_\_

## Unit J Exam Review

1. A line contains points  $(-3, 3)$  and  $(1, 2)$ . What is the slope of this line? 1. \_\_\_\_\_

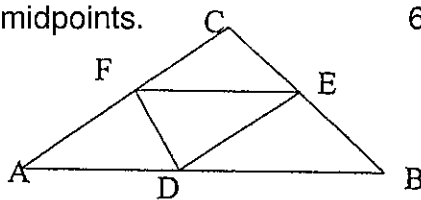
2. If a line has slope 2, each line perpendicular to it has slope \_\_\_\_\_ and each line parallel to it has slope \_\_\_\_\_.

3. Line  $j$  has equation  $-6x + 7y = 13$ . If line  $k$  is perpendicular to  $j$ , what is the slope of  $k$ ? 3. \_\_\_\_\_

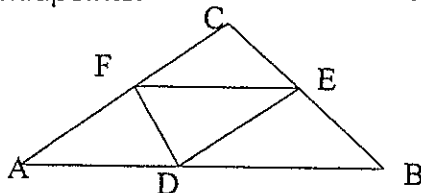
4. Give the coordinates of the midpoint of the segment joining  $(2, 3)$  and  $(4, -2)$ . 4. \_\_\_\_\_

5. Give the coordinates of the midpoint of the segment joining  $(-6, -4)$  and  $(3, 5)$ . 5. \_\_\_\_\_

6. In  $\triangle ABC$  below,  $D$ ,  $E$ , and  $F$  are midpoints. If  $FD = 5.3$  inches, find  $CB$ . 6. \_\_\_\_\_



7. In  $\triangle ABC$  below,  $D$ ,  $E$ , and  $F$  are midpoints. If  $FE = 7.5$  cm, find  $BA$ . 7. \_\_\_\_\_



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8. Find the distance between  $X = (8, 4)$  and  $Y = (12, -3)$ . 8. \_\_\_\_\_

9. Find the distance between  $A = (3, -1)$  and  $B = (-2, -3)$ . 9. \_\_\_\_\_

10. Consider the circle with equation  $(x + 3)^2 + (y - 4)^2 = 16$ .

a. Find the center. 10a. \_\_\_\_\_

b. Find the radius. b. \_\_\_\_\_

11. Write an equation to the circle with center  $(2, -4)$  and radius 6.

12. Write an equation to the circle with center  $(0, 0)$  and radius 11.