Name: _____ Date: _____

UNIT 7 **REVIEW**

QUIZ REVIEW: SLOPES AND EQUATIONS OF LINES

1. What is an equation of the line that passes through the point $(-2, 3)$ and is parallel to the line whose equation is $y = \frac{3}{2}x - 4$?

1) $y = \frac{-2}{3}x$

2) $y = \frac{-2}{3}x + \frac{5}{3}$

3) $y = \frac{3}{2}x$

4) $y = \frac{3}{2}x + 6$

2. Which equation represents the line that is perpendicular to $2y = x + 2$ and passes through the point $(4, 3)$?

1) $y = \frac{1}{2}x - 5$

2) $y = \frac{1}{2}x + 1$

3) $y = -2x + 11$

4) $y = -2x - 5$

3. Which equation represents a line parallel to the line whose equation is $2y - 5x = 10$ and passes through the point $(2,7)$?

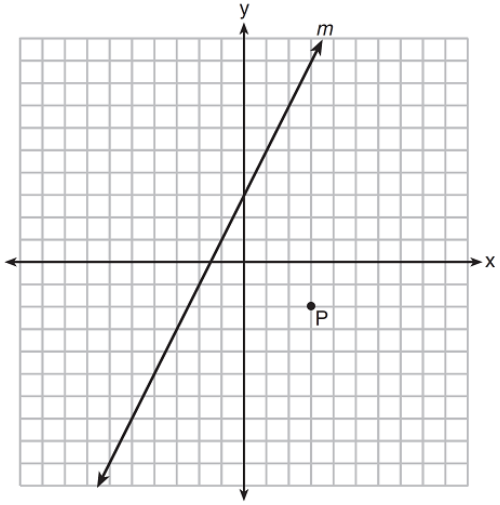
1) $y + 7 = -\frac{2}{5}(x + 2)$

2) $y + 7 = \frac{5}{2}(x + 2)$

3) $y - 7 = -\frac{2}{5}(x - 2)$

4) $y - 7 = \frac{5}{2}(x - 2)$

4. Line *m* and point *P*(3, -2) are shown in the graph below. Which equation represents the line passing through *P* and parallel to line *m*?



1) $y = 2x + 7$

2) $y = 2x - 8$

3) $y = -\frac{1}{2}x + 2$

4) $y = -\frac{1}{2}x - \frac{1}{2}$

5. Which equation represents the perpendicular bisector of $\overline{AB}$ whose endpoints are $A(8, 2)$ and $B(0, 6)$?

1) $y - 4 = 2(x - 4)$

2) $y - 4 = -\frac{1}{2}(x - 4)$

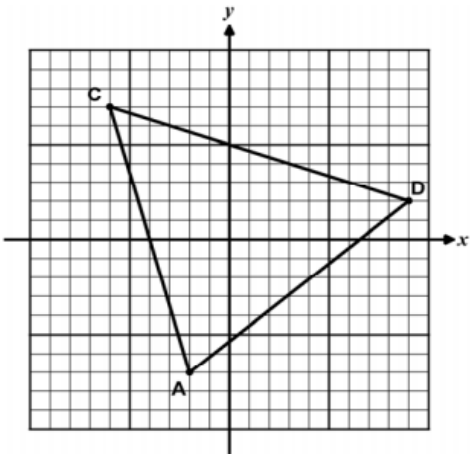
3) $y - 6 = -\frac{1}{2}x$

4) $y - 2 = 2(x - 8)$

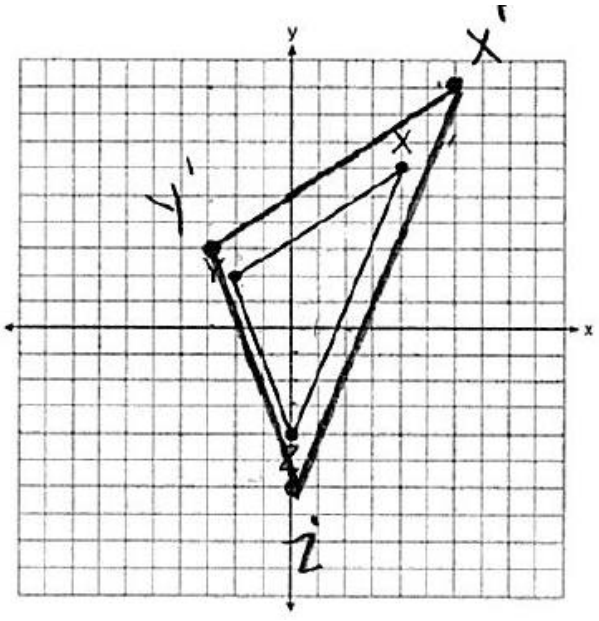
6. Find an equation of the line passing through the point $(6, 5)$ and perpendicular to the line whose equation is $2y + 3x = 6$.

7. Find an equation of the line passing through the point $(5,4)$ and parallel to the line whose equation is $2x + y = 3$.

8. In the diagram shown, ΔADC has vertices $A(-2,-7)$, $D(9,2)$, and $C(-6,7)$. What is the slope of the altitude drawn from *C* to $\overline{AD}$?



9. Triangle *XYZ* is graphed on the set of axes below. On the same set of axes, $\Delta X'Y'Z'$, the image of ΔXYZ after a dilation with a scale factor of $\frac{3}{2}$ centered at the origin is shown. Use slopes to explain why $\overline{Y'X'} \| \overline{YX}$.



10. If $\overline{AB}$ is defined by the endpoints $A(-1,0)$ and $B(6,4)$, write an equation of the line that is the perpendicular bisector of $\overline{AB}$.

11. In rhombus *ABCD*, the coordinates of the endpoints of the diagonal $\overline{BD}$ are $B(8,2)$ and $D(2,6)$. Write an equation of the diagonal $\overline{AC}$ that is the perpendicular bisector of $\overline{BD}$. [Use of the set of axes below is optional.]