Geometry
Ch. 4 & 6 HW #9

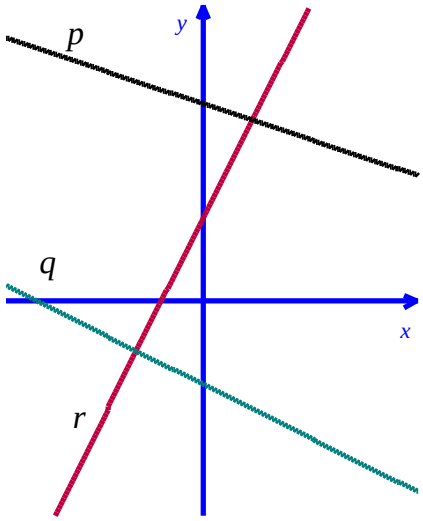
Name: _____
Period: ____

Solve the following equations.

1. $6x^2 - 1x - 2 = 0$ (by factoring)	2. $6x^2 - 1x - 2 = 0$ (by the quadratic formula) →	If $ax^2 + bx + c = 0$, then $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
3. $2x^2 + 7x - 4 = 0$ (by factoring)	4. $2x^2 + 7x - 4 = 0$ (by the quadratic formula)	

Linear Functions

5. The equations of the lines shown at right are $-2x + y = 5$, $-x - 2y = 10$ and $x + 3y = 36$.



a) Determine which equation matches each line. Changing them to $y = mx + b$ is helpful.
b) Which, if any, are parallel? Explain how you know using the equations.
c) Which, if any, are perpendicular? Explain how you know using the equations.
d) Solve the system by substitution or elimination and label the solution on the graph. $\begin{cases} -2x + y = 5 \\ x + 3y = 36 \end{cases}$
e) Solve the system by substitution or elimination and label the solution on the graph. $\begin{cases} -2x + y = 5 \\ -x - 2y = 10 \end{cases}$

6. Find the equation of the line that passes through $(15, -8)$ and $(12, -3)$. Use the slope formula and then the point-slope formula.

7. Find the equation of the line that is perpendicular to $y = \dfrac{-1}{4}x - 3$ that passes through $(-2, 1)$. After finding the equation, graph both lines neatly on graph paper.

8. Graph the line $y = 2x - 1$ and $y = \dfrac{1}{2}x + 1$ on the same axes. Are the lines parallel, perpendicular or neither?

9. Graph the lines $x = 2$, $y = 3$ and $y = -x$ on the same axes. Find the area of the triangle enclosed by the lines.

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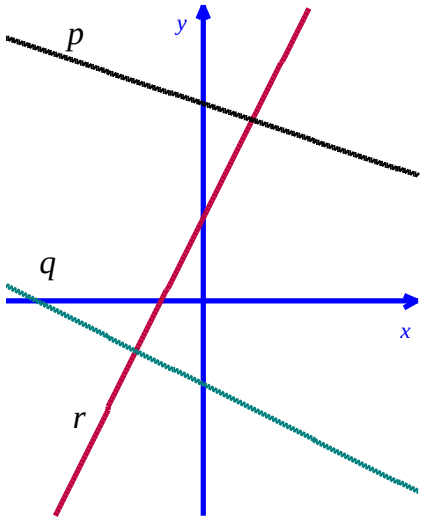

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