

Name: _____ Date: _____ Period: _____

Unit 6 Day 8 - Equations of Perpendicular Lines Classwork

At the right is a diagram of parallel and perpendicular lines.

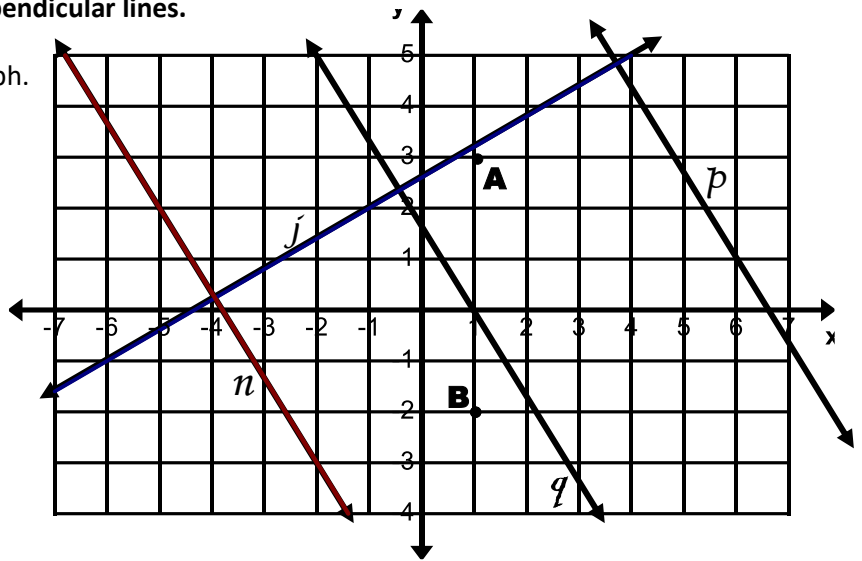
1. Write the equation of each line in the graph.

Line j :

Line n :

Line q :

Line p :



2. What do you notice about lines p and j ? Lines q and j ? Lines n and j ?

3. Write an equation of a line through Point A and perpendicular to line j .

4. Write an equation of a line through Point B and perpendicular to line q .

5. Are the two new lines parallel, perpendicular or neither? How do you know?

6. Write an equation of a line perpendicular to $y = 3x + 2$ and through point $(2, 6)$.

7. Write an equation of a line perpendicular to $y = \frac{1}{2}x - 1$ and through point $(4, -1)$.

8. Write an equation of a line perpendicular to $y = 7$ and through point $(-5, -8)$.

9. This is the point-slope form of a line: $y - y_1 = m(x - x_1)$. Explain what each variable means.