4-2 Equation of Lines in Slope intercept form

Name: _____ Time› Start: _____ Finish: _____ Total Time = _____

Remember that $y = mx + b$ is the equation of a line in slope-intercept form.
A helpful equation to remember is that $y - y_1 = m(x - x_1)$.

_____ 1. Find the equation of the line, in slope intercept form, that goes through the point (2, 8) and has a slope of -3.

_____ 2. Find the equation of the line, in slope intercept form, that goes through the point (-1, -2) and has a slope of ½ .

_____ 3. Find the equation of the line, in slope intercept form, that goes through the point (2, 8) and (3, 10).

_____ 4. Find the equation of the line, in slope intercept form, that goes through the point (-1, -8) and (-3, -12).

_____ 5. Find the equation of the line, in slope intercept form, that goes through the point (0, 4) and has a slope of -5.

_____ 6. Find the equation of the line, in slope intercept form, that goes through the point (0, 8) and (2, 10).

_____ 7. Give the equation of the line, in slope intercept form, that is parallel to $y = 8x - 5$ and passes through the point (1, 20).

_____ 8. Give the equation of the line, in slope intercept form, that is parallel to $y = 2x - 1$ and passes through the point (3, 9).

_____ 9. Give the equation of the line, in slope intercept form, that is perpendicular to $y = 2x - 5$ and passes through the point (2, 8).

_____ 10. Give the equation of the line, in slope intercept form, that is perpendicular to $y = 4x - 5$ and passes through the point (4, 12).

SAT Questions

_____11. For all positive integers x, let x♦ be defined to be (x – 1)(x + 1). Which of the following is equal to 6♦ - 5♦?

A. 2♦ + 1♦
B. 3♦ + 2♦
C. 4♦ + 3♦
D. 5♦ + 4♦
E. 6♦ + 5♦

_____12. If $a < b < -1$, which of the following has the greatest value?

A. $-3a + b$
B. $-(a - b)$
C. $-(3a + b)$
D. $3a$
E. $a - b$

_____13. Which of the following expresses the number that is 12 less than the product of 3 and $x + 1$?

A. $x - 8$
B. $x + 37$
C. $3x - 11$
D. $3x - 9$
E. $3x + 15$