1. If $2x - 3 = 8$, what is the value of $6x + 1$?

$+3 \quad +3$

$2x = 11$

$6x = 33$

$6x + 1 = 34$

2. Find the ordered pair (x, y) that satisfies the system of equations below.

$$x - y = 4$$
$$2x + 3y = 3$$

$3 - 4 = 4$

$3x - 3y = 12$

$-4 = 1$

$5x = 15$

$4 = -1$

$x = 3$

$(3, -1)$

$x_2\ y_2 \quad x_1\ y_1$

3. Line l has slope of 1/3. If it passes (0, -2) and (k, 0), find k.

$$m = \frac{y_2 - y_1}{x_2 - x_1} \qquad \frac{-2-0}{0-k} = \frac{1}{3}$$

$$\frac{-2}{-k} = \frac{1}{3} = \frac{2}{k} \qquad k = 6$$

4. Given: $A = \frac{B}{3-B}$. Solve for B.

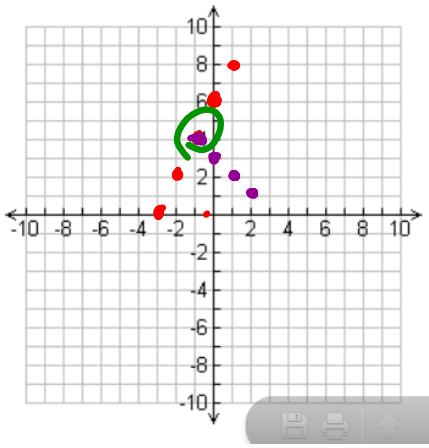
$$\frac{A}{1}$$

$$B = A3 - AB$$

$$AB + B = 3A$$

$$\frac{B(A+1)}{A+1} = \frac{3A}{A+1} \qquad B = \frac{3A}{A+1}$$

5. The graph of a line in the *xy*-plane has slope 2 and contains the point (1, 8). The graph of a second line passes through the points (1, 2) and (2, 1). If the two lines intersect at the point (*a*, *b*), what is the value of $a + b$?



(-1, 4)

$-1 + 4 = \boxed{3}$

6. What is the sum and product of the roots for $2x^2 - 8x = 5$?

$ax^2 + bx + c = 0$

$\text{sum} = -\frac{b}{a}$ $\quad$ $\text{prod} = \frac{c}{a}$

$2x^2 - 8x - 5 = 0$

$s = \frac{-(-8)}{2} = \boxed{4}$ $\quad$ $p = \boxed{\frac{-5}{2}}$

7. Express the given expressions with quotient and remainder.

$$\frac{3x+0}{x-2}$$

2 | 3 0
  ↓ 6
  3 6

$3 + \frac{6}{x-2}$