

Do Now

1) What is the equation of a line in slope-intercept form that goes through point (5,2) and has a slope of

-3?
m

$$y = mx + b$$
$$m = -3$$
$$b = 17$$

$$y = -3x + 17$$

(5,2) m = -3
x y

$$y = mx + b$$

$$2 = (-3)(5) + b$$

$$2 = -15 + b$$

$$+15 \quad +15$$

$$17 = b$$

2) What is the equation of a line in slope-intercept form that goes through the points (3,4) and (5,8)?

$$y = mx + b$$
$$m = 2$$
$$b = -2$$

$$y = 2x - 2$$

m

(3,4) (5,8)
x₁ y₁ x₂ y₂

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{8 - 4}{5 - 3}$$

$$m = \frac{4}{2}$$

$$m = 2$$

b

(3,4) m = 2
x y

$$y = mx + b$$

$$4 = (2)(3) + b$$

$$4 = 6 + b$$
$$-6 \quad -6$$

$$-2 = b$$