Practice TEST

Solve

1. $x + 15 = -2$

$X = -17$

2. $4x = -28$

$x = -7$

3. $3 = -\dfrac{5}{x}$

$3x = -5$

$x = -5/3$

4. $5p + 2 = -13$

$5p = -15$

$p = -3$

5. $5x - 8 = 6 - 2x$

$5x + 2x = 6 + 8$

$7x = 14$

$x = 2$

6. $3(y + 8) = -y$

$3y + 24 = -y$

$3y + y = -24$

$4y = -24$

$y = -6$

7. $\dfrac{r}{3} - 2 = 7$

$\dfrac{r}{3} = \dfrac{9}{1}$

$r = 27$

8. $\dfrac{k+2}{5} = -4$

$1(k+2) = -20$

$k + 2 = -20$

$k = -22$

9. $\dfrac{1}{2}(9 - x) = 1$

$\dfrac{(9-x)}{2} = \dfrac{1}{1}$
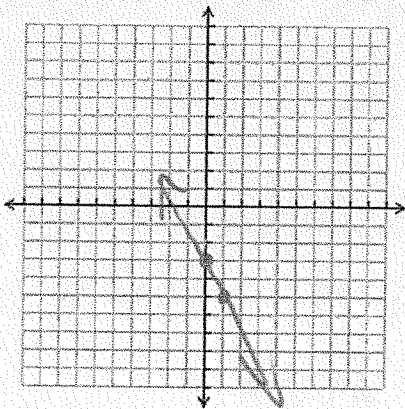
$1(9-x) = 2$

$9 - x = 2$

$-x = -7$

$x = 7$

Write the equation in slope y-intercept form. Then sketch

10. $4x + 2y + 6 = 0$

$2y = -4x - 6$
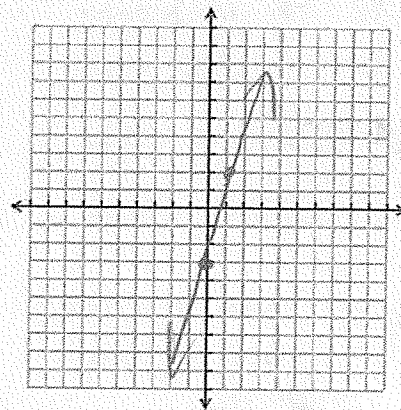
$y = -2x - 3$

$m = -\dfrac{2}{1} \quad b = -3$

11. $5x - y - 3 = 0$

$5x - 3 = y$

$m = \dfrac{5}{1} \quad b = -3$

Rearrange the formula to get the letter the bracket isolated.

1. $S = t + a$ (t)

$$S - a = t$$

2. $PV = T$ (V)

$$V = \frac{T}{P}$$

3) $S = \frac{VAT}{500}$ (T)

$$500 = VAT$$
$$\frac{500}{VA} = T$$

4. $V^2 = 4gh$ (h)

$$\frac{V^2}{4g} = h$$

5. $a = \frac{p}{q}$ (p)

$$aq = p$$

6. $v = u + at$ (u)

$$v - at = u$$

7. Isolate y
$x = 2(y - 1) + 8$

$$x = 2y - 2 + 8$$
$$x = 2y + 6$$
$$x - 6 = 2y$$
$$\frac{x - 6}{2} = y$$

8. If the line $x + By + 3 = 0$ passes through $(0, -2)$, determine the value of B.

$$0 + B(-2) + 3 = 0$$
$$-2B + 3 = 0$$
$$-2B = -3$$
$$B = 1.5$$

9. Heidi plans to add a cedar deck to her house. She asked Robin and Just Decks for estimates. Robin will charge $2000 for materials and $50 per hour for labour. Just Decks will charge $1800 for materials and $80 per hour for labour.

   a. Assign variables and create two equations for Robin and Just Decks.
   b. If Heidi thinks the job should not take more than 10 hours, who should she hire to build her deck?

(a) let x be # of hours
let y be total cost.
Robin: $y = 2000 + 50x$
Decks: $y = 1800 + 80x$

(b) Robin: $y = 2000 + 50(10)$
$= 2000 + 500$
$= 2500$

Decks: $y = 1800 + 80(10)$
$= 1800 + 800$

∴ she should hire Robin

10. A company's postage machine starts the week with a balance of $40. Each time an envelope is stamped, $0.55 is deducted from the balance.

   a. Assign variables and create an equation for this problem.
   b. If the balance is $4.25, how many envelopes were stamped?

(a) let x be # of envelopes
let y be total balance
$$y = 40 - 0.55x$$

(b) $$4.25 = 40 - 0.55x$$
$$-35.75 = -0.55x$$
$$65 = x$$

∴ 65 envelopes were stamped