Activity 1.4.5: Linear Equations in Two Variables

Total points = 47

A. Answers

∴ Sol. =
$$(-4, 4)$$
 ✓
3. $3x - 2y = -3$ ✓
 $3(1) - 2y = -3$ ✓
 $3 - 2y = -3$ ✓
 $3 - 3 - 2y = -3 - 3$ ✓
 $\frac{-2y}{-2} = \frac{-6}{-2}$ ✓

∴ Sol. =
$$(1,3)$$
 ✓
4. $-\frac{1}{2}x + 4y = 4$ ✓
 $-\frac{1}{2}(-4) + 4y = 4$ ✓
 $2 + 4y = 4$ ✓
 $2 - 2 + 4y = 4 - 2$ ✓
 $\frac{4y}{4} = \frac{2}{4}$ ✓
 $y = \frac{1}{2}$ ✓
∴ Sol. = $(-4, \frac{1}{2})$ ✓
5. $-2x + 3y = 9$ ✓
 $-2(3) + 3y = 9$ ✓
 $-6 + 3y = 9$ ✓

-6 + 6 + 3y = 9 + 6

 $\frac{3y}{3} = \frac{15}{3} \checkmark$ $y = 5 \checkmark$

: Sol. = (3,5)

Activity 1.4.5: Linear Equations in Two Variables

Total points = 47

A. Answers $\frac{9}{2}$ 1. 4x - 5y = 2

$$4(-2) - 5y = 2 \checkmark$$

$$-8 - 5y = 2 \checkmark$$

$$-8 + 8 - 5y = 2 + 8 \checkmark$$

$$\frac{-5y}{-5} = \frac{10}{-5} \checkmark$$

$$y = -2 \checkmark$$

$$\therefore \text{Sol.} = (-2, -2) \checkmark$$

$$x + 6y = 20 \checkmark$$

2.
$$x + 6y = 20 \checkmark$$

 $-4 + 6y = 20 \checkmark$
 $-4 + 4 + 6y = 20 + 4 \checkmark$
 $\frac{6y}{6} = \frac{24}{6} \checkmark$
 $y = 4 \checkmark$
 \therefore Sol. = $(-4, 4) \checkmark$
3. $3x - 2y = -3 \checkmark$

∴ Sol. =
$$(-4, 4)$$
 ✓
3. $3x - 2y = -3$ ✓
 $3(1) - 2y = -3$ ✓
 $3 - 2y = -3$ ✓
 $3 - 3 - 2y = -3 - 3$ ✓
 $\frac{-2y}{-2} = \frac{-6}{-2}$ ✓

$$y = 3$$
 ✓
∴ Sol. = (1,3) ✓
4. $-\frac{1}{2}x + 4y = 4$ ✓
 $-\frac{1}{2}(-4) + 4y = 4$ ✓
 $2 + 4y = 4$ ✓
 $2 - 2 + 4y = 4 - 2$ ✓
 $\frac{4y}{4} = \frac{2}{4}$ ✓
 $y = \frac{1}{2}$ ✓
∴ Sol. = $(-4, \frac{1}{2})$ ✓

5.
$$-2x + 3y = 9\sqrt[2]{}$$

 $-2(3) + 3y = 9\sqrt[4]{}$
 $-6 + 3y = 9\sqrt[4]{}$
 $-6 + 6 + 3y = 9 + 6\sqrt[4]{}$
 $\frac{3y}{3} = \frac{15}{3}\sqrt[4]{}$
 $y = 5\sqrt[4]{}$
 \therefore Sol. = (3,5) \checkmark

B. Answers

Slope =
$$-3 \checkmark$$
; y-intercept = 2

D. Answers

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A. Answers

$$\begin{array}{ll} \frac{37}{2} 1. & 4x - 5y = 2 \checkmark \\ 4(-2) - 5y = 2 \checkmark \\ -8 - 5y = 2 \checkmark \\ -8 + 8 - 5y = 2 + 8 \checkmark \\ \frac{-5y}{-5} = \frac{10}{-5} \checkmark \\ y = -2 \checkmark \end{array}$$

∴ Sol. =
$$(-2, -2)$$
 ✓
2. $x + 6y = 20$ ✓
 $-4 + 6y = 20$ ✓
 $-4 + 4 + 6y = 20 + 4$ ✓
 $\frac{6y}{6} = \frac{24}{6}$ ✓
 $y = 4$ ✓
∴ Sol. = $(-4, 4)$ ✓

3.
$$3x - 2y = -3\checkmark$$

 $3(1) - 2y = -3\checkmark$
 $3 - 2y = -3\checkmark$
 $3 - 3 - 2y = -3 - 3\checkmark$
 $\frac{-2y}{-2} = \frac{-6}{-2}\checkmark$

∴ Sol. =
$$(1,3)$$
 ✓
4. $-\frac{1}{2}x + 4y = 4$ ✓
 $-\frac{1}{2}(-4) + 4y = 4$ ✓
 $2 + 4y = 4$ ✓
 $2 - 2 + 4y = 4 - 2$ ✓
 $\frac{4y}{4} = \frac{2}{4}$ ✓
 $y = \frac{1}{2}$ ✓
∴ Sol. = $(-4, \frac{1}{2})$ ✓

5.
$$-2x + 3y = 9\checkmark$$

 $-2(3) + 3y = 9\checkmark$
 $-6 + 3y = 9\checkmark$
 $-6 + 6 + 3y = 9 + 6\checkmark$
 $\frac{3y}{3} = \frac{15}{3}\checkmark$
 $y = 5\checkmark$
 \therefore Sol. = (3,5) \checkmark

B. Answers

Activity 1.4.5: Linear Equations in Two Variables

Total points = 47

A. Answers

$$\begin{array}{ll} \frac{1}{98} \ 1. & 4x - 5y = 2 \ \checkmark \\ 4(-2) - 5y = 2 \ \checkmark \\ -8 - 5y = 2 \ \checkmark \\ -8 + 8 - 5y = 2 + 8 \ \checkmark \\ \frac{-5y}{-5} = \frac{10}{-5} \ \checkmark \\ y = -2 \ \checkmark \\ \therefore \ \text{Sol.} = (-2, -2) \ \checkmark \end{array}$$

∴ Sol. =
$$(-2, -2)$$
 ✓
2. $x + 6y = 20$ ✓
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 $2 + 4y = 4$ ✓
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 $\frac{4y}{4} = \frac{2}{4}$ ✓
 $y = \frac{1}{2}$ ✓
∴ Sol. = $(-4, \frac{1}{2})$ ✓

5.
$$-2x + 3y = 9\sqrt{2}$$

 $-2(3) + 3y = 9\sqrt{2}$
 $-6 + 3y = 9\sqrt{2}$
 $-6 + 6 + 3y = 9 + 6\sqrt{2}$
 $\frac{3y}{3} = \frac{15}{3}\sqrt{2}$
 $y = 5\sqrt{2}$
 \therefore Sol. = $(3, 5)\sqrt{2}$

B. Answers