

Opener

1. Solve for x :

$$21 = \frac{1}{2}x + 7$$

$$\boxed{x = 28} \quad \left(\frac{2}{1}\right)14 = \frac{1}{2}x \left(\frac{2}{1}\right)$$

2. Solve for x :

$$x =$$

$$\begin{aligned} -2x + 9 - 3x &= 24 \\ -5x + 9 &= 24 \end{aligned} \quad \int \begin{aligned} -5x &= 15 \\ x &= -3 \end{aligned}$$

3. Solve for x :

$$-9 \quad -9$$

$$\begin{aligned} -2(x+1) + x &= -3x + 2(4x+5) \\ -2x + 2 + x &= -3x + 8x + 10 \end{aligned} \quad \begin{array}{l} \text{Disp. Prop of} \\ \text{Mult. of} \\ \text{Add.} \end{array}$$

$$\begin{array}{r} -x + 2 = 5x + 6 \\ +2 = +2 \\ \hline -x = 5x + 8 \\ +x = +x \\ \hline 0 = 6x + 8 \\ -8 = -8 \\ \hline -8 = 6x \\ \frac{-8}{6} = \frac{6x}{6} \\ -\frac{8}{6} = x \\ -\frac{4}{3} = x \end{array}$$

CLT
 Reflexive Prop.
 Add. Prop of Eq.
 Reflex Prop
 Add Prop of Eq
 Reflexive Prop
 Sub Prop of Eq
 Reflexive
 Div. Prop. of Eq
 Simplify

Questions on 2B4A

2 B4A Review Solving Equations

Name: _____ Per: _____

SHOW YOUR WORK FOR FULL CREDIT. NO WORK, NO CREDIT. NO WORK IN PEN.

Solving Two Step Equations. Solve for x

1. $3x + 7 = -5$

3. $5x - 2 = -32$

2. $18 = \frac{1}{2}x + 10$

4. $-x + 7 = -2$

Combining Like Terms and Solving Equations. Solve for x

5. $5x + 18 - 8x = 33$

$$-3x = 15$$

8. $-5 + x + 16 = -3$

6. $-3x - 4 + 2x = 2$

9. $7x + 14 - 5x$

$$2x + 14$$

7. $5 - \frac{1}{2}x + 3 = -30$

10. $2 + 3x - 2x = -15$

Distribute, Combine and Solve. Solve for x

11. $-(3 - x) = 4$

12. $4(x - 2) + 2x = 40$

13. $3(x - 12) = 27$

$$\frac{2}{1} \left[\frac{1}{2}(4x - 4) = -60 \right] \frac{3}{1}$$

$$4x - 4 = -120$$

$$+4 \quad +4$$

$$\frac{4x}{4} = \frac{-116}{4}$$

15. $9 = 6 - (x + 2)$


16. $3(x - 2) + 5 = 14$

$$x = -29$$

$$\begin{array}{r} 29 \\ 4 \overline{) 116} \\ \underline{8} \\ 36 \end{array}$$

Extra Credit (SHOW YOUR WORK): $(4x + 2) - (12x + 8) + 2(5x - 3) = 16$

Grade 2B4A

 2 B4A Review Solving Equations KEY.notebook

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An Overview of Unit 2 in Study Guide ~~7/13~~^{5/6}

Properties of Equality

Reflexive Property

$$a = a$$

Properties of Equality

Addition Property of Equality

Example

Subtraction Property of Equality

Example

Properties of Equality

Multiplication Property of Equality

Example

Division Property of Equality

Example

Properties of Equality

Distributive Property of Multiplication over
Addition and Subtraction

$$a(b+c) = ab+ac$$

Example

Solve for X

$$\begin{array}{r}
 18x - 2y = 9 \\
 + 2y = +2y \\
 \hline
 18x = 9 + 2y \\
 \frac{18x}{18} = \frac{9}{18} + \frac{2y}{18} \\
 x = \frac{9}{18} + \frac{2}{18}y \\
 x = \frac{1}{2} + \frac{1}{9}y
 \end{array}$$

Given

Reflexive

Add Prop of Eq.

- Refl.

Div Prop of Eq.

Simplification

Solve for x :

$$2(x+4) + 3y = -4y + 9$$

$$2x + 8 + 3y = -4y + 9$$

$$-8 - 3y = -4y - 8$$

$$= -7y + 1$$

$$\frac{2x}{2}$$

$$= \frac{-7y}{2} + \frac{1}{2}$$

 x

$$= -\frac{7}{2}y + \frac{1}{2}$$

GivenDist Prop. of Mult.Reflexive Prop.Add. Prop. of Eq.Reflexive Prop.Div. Prop. of Eq.

Solve for x:

$$3(x-5)=2(x+1)$$

$$3x - 15 = 2x + 2$$

$$-2x + 15 = -2x + 15$$

$$x = 17$$

Solve for z:

$$10(y-z)=5(m+z)$$
$$10y-10z=5m+5z$$
$$\frac{10y-5m}{15} = \frac{15z}{15}$$
$$\frac{2}{3}y - \frac{1}{3}m = z$$

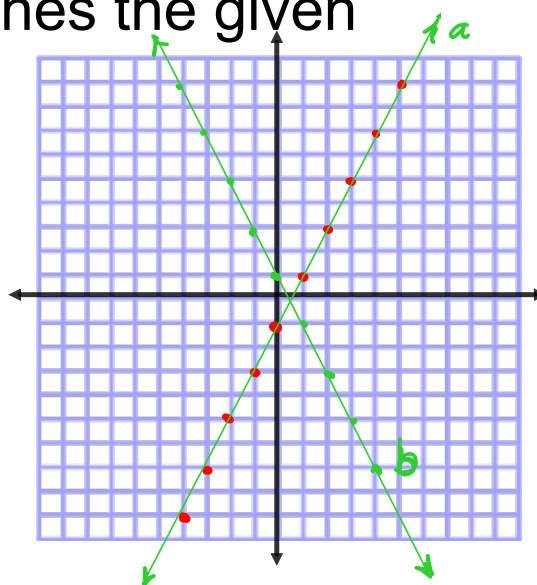
Determine which line matches the given equation:

$$2x - 1 = y$$

$$y\text{-int } (0, -1)$$

$$\text{Slope} = \frac{2}{1}$$

Line a is the right graph.



Attachments

2 B4A Review Solving Equations KEY.pdf

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SMI Term 1 Booklet.pdf