

HW 1-1 pg. 94: 11-21 odd, 25, 36, 37, 54

36, 37, 15, 54b

$$15. \frac{y}{5} - 6 = 8$$

$$\frac{y}{5} + 6 \quad + 6$$

$$\cancel{5} \frac{y}{\cancel{5}} = 14 \cdot 5$$

$$\boxed{y = 70}$$

$$36 - \frac{-5}{2} = \frac{3}{4}z + \frac{1}{2}$$

$$\frac{1}{2} \quad \quad \quad -\frac{1}{2}$$

$$\frac{-5}{2} - \frac{1}{2} = \frac{3}{4}z$$

$$\frac{-6}{2} = \frac{3}{4}z$$

$$\frac{4}{3} \cdot \frac{3}{1} = \cancel{\frac{3}{4} \cdot z} \cancel{\frac{4}{4}}$$

$$\frac{-12}{3} = z$$

$$\frac{-4}{1}$$

$$\boxed{-4 = z}$$

59b. $\frac{1}{a}x - 4 = a$

~~$\frac{1}{a}x - 4 + 4 = a + 4$~~

~~$\frac{1}{a}x = a + 4$~~

$x = 13a$

1-2 – Solving Multi-step Equations

Objectives:

- I can solve an equation doing 2 or more steps
- I can distribute and combine like terms

Vocabulary: distribute, like terms, combine, isolate

Combining like terms:

Handwritten notes on combining like terms:

- exp**: A blue circle containing $4x^2$, x^3 , $-2x^3$, and x^2 .
- xy**: A blue circle containing $-2xy$ and $-4xy$.
- neg**: A blue circle containing -7 and -9 .
- pos**: A blue circle containing 6 and 3 .
- k**: A blue circle containing $-5k$ and $8k$.

Combining like terms:

Handwritten notes on combining like terms:

- V.E.**: A red circle containing $4x^2$ and x^2 . Next to it is $x \cdot x$.
- V.E.**: A red circle containing $-2x^3$ and x^3 . Next to it is $x \cdot x \cdot x$.
- xy**: A green circle containing $-2xy$ and $-4xy$.
- constants**: A green circle containing $\frac{1}{2}$, -7 , -9 , 6 , and 3 .
- Operations**: Handwritten equations:
 - $3a - 5a = -2a$
 - $2a - a = a$
 - $2 - 1 = 1$

$$\begin{array}{r} \cancel{5a} + 6 - \cancel{a} + 7 - 2 \\ \hline 5a - a + 6 + 7 - 2 \\ \hline 4a + 11 \end{array}$$

$$\begin{array}{r} -11k + 2k - 7 + 5k - 2 \\ \cancel{-11k + 2k + 5k} = -4k \\ \hline -7 - 2 = -9 \\ \hline -4k - 9 \end{array}$$

Distributing: $2(3) = 6$
multiply!

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

$$2x - 6$$

$$4(-y + 3)$$

$$-4y + 12$$

$$3(2x - 4y)$$

$$6x - 12y$$

P.E.M.D.A.S.

$$8(n+3) = 2 + 54$$

$$\begin{array}{r} 8n + 24 = 56 \\ -24 \quad \quad \quad -24 \\ \hline 8n = 32 \\ \hline \boxed{n = 4} \end{array}$$

$$7 = -2(y - 4) + 6$$

$$\begin{array}{r} 7 = -2y + 8 + 6 \\ 7 = -2y + 14 \\ -14 \quad \quad \quad -14 \\ \hline -7 = -2y \\ \hline \boxed{\frac{7}{2} = y} \end{array}$$

$$3(-4 + x) + 1 = 1$$

$$\cancel{-12} + 3x + 1 = 1$$

$$\begin{array}{r} -11 + 3x = 1 \\ +11 \quad \quad \quad +11 \\ \hline 3x = 12 \end{array}$$

$$\boxed{x = 4}$$

$$4(m - 2n) = 8 \text{ for } m$$

$$\begin{array}{r} 4m + 8n = 8 \\ +8n \quad +8n \\ \hline 4m = 8 + 8n \end{array}$$

$$\boxed{m = \frac{8}{4} + \frac{8n}{4}}$$

$$\boxed{m = 2 + 2n}$$

$$4(x-2) + 2(x+1) = 3$$
$$4x - 8 + 2x + 2 \leftarrow \{$$

$$6x - 6 = 3$$

$$+6 +6$$

$$6x = 9$$

$$\div 6 \quad \div 6$$

$$x = \frac{9}{6} \quad \boxed{x = \frac{3}{2}}$$

$$-2(a-b) + a - 4b = 7 \text{ for } b$$

Write an equation that equals -6

The formula for the area of a triangle is $A = \frac{1}{2}bh$
 where A represents area, b represents the length of the base and h represents the height of the triangle.

- a. Solve the formula for height, h

$$\boxed{\frac{2A}{b} = h}$$

$$\frac{2 \cdot A}{b} \cancel{\cdot} \frac{1}{2} \cancel{\cdot} h$$

$$\frac{2A}{b} = \underline{h}$$

- b. Find the height of a triangle that has a base of 3cm and an area of 12cm^2

$$\frac{2 \cdot 12}{3} = h$$

$$\frac{24}{3} = h$$

$$\boxed{8\text{cm} = h}$$

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 53, 56, 57, 59

$$3. 6(n+4) = -18 \quad 17. 6(n+5) = 66$$

$$4. 7 = -11 + 3(b+5)$$

$$15. \frac{5v-4}{10} = \frac{4}{5}$$

$$16. 8 = 4(r+4)$$