

1/30 Algebraic Equations Ch 7

p. 513

expression vs equation [algebraic]

- * both have numbers
- * both have operation signs (+, -, *, ÷)
- * both have variables
- * DIFFER
 - * equations have a balance on both sides of an equal sign.
 - * expression is just the "problem" but no "answer."

BALANCING EQUATIONS

① Follow order of operations ...
... undo order of operation in reverse

② Isolate the variable

isolate variable (unknown)

$$\begin{array}{r} \boxed{} + 4 = 8 + 2 \\ \quad \quad \quad \wedge \\ \quad \quad \quad -4 \quad \quad -4 \\ \hline \boxed{} = 6 \\ \quad \quad \quad \wedge \end{array}$$

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$$\begin{array}{r} \square + 4 = 8 + 2 \\ \hline -4 \qquad -4 \end{array}$$

$$\begin{array}{r} \square = 6 \\ \hline \end{array}$$



Lesson 7.1

p 517-518 (HW)

$$\textcircled{1} \quad \begin{array}{r} 29 + d = 54 \\ -29 \quad -29 \\ \hline \end{array}$$

$$d = 25$$

$$\begin{array}{r} 29 + 25 = 54 \\ \checkmark \quad - \quad \checkmark \end{array}$$

$$\begin{array}{r} \uparrow \quad \quad \quad \uparrow \\ \textcircled{29} + \textcircled{d} = 54 - \textcircled{29} \\ \quad \quad \quad \uparrow \end{array}$$

why 29?

- ① because 29 was with the d
- ② I have to subtract because it was add
- ③ I have to -29 on both sides to keep the balance

$$\textcircled{2} \quad \begin{array}{r} 35 = 45 - N \\ -45 \quad -45 \\ \hline \end{array} \rightarrow \text{zero pair}$$

$$\begin{array}{r} +10 = +N \\ -10 \quad -10 \\ \hline \end{array}$$
$$10 = N$$

check

$$\begin{array}{l} 35 = 45 - N \\ 35 = 45 - 10 \end{array}$$

$$\textcircled{3} \quad \begin{array}{r} 6w = 30 \\ \downarrow \quad \quad \downarrow \\ \textcircled{w = 5} \end{array} \quad = \quad w + w + w + w + w + w = 30$$

check

$$\begin{array}{l} 6(5) = 30 \\ 30 = 30 \\ \checkmark \end{array}$$

$$4. \quad \begin{array}{l} x \div 7 = 3 \\ *7 \quad *7 \end{array}$$

check

$$7(x \div 7) = 7(3)$$

$$\textcircled{1} \quad \begin{array}{l} 21 \div 7 = 3 \\ 3 = 3 \quad \checkmark \end{array}$$

$$x = 21$$

HW = #5-10

solve mentally
show the "work"
on any two of them

#11, 12, 13

- solve mentally
- be prepared to explain

- isolate variable
- solve