

BE-1A

MONDAY 9-29-08

①  $-12 - 9$

②  $-12 + 9$

③  $-12(9)$

④  $-12 \div 9$

⑤  $-\frac{3}{4} - \frac{2}{3}$

⑥  $-12 - (-9)$

⑦  $\frac{5}{3} \div \frac{2}{5}$

⑧  $5 \div \frac{1}{2}$

Signs: +, - SSA, KSS  
DSS, BOW  
 $\begin{pmatrix} + \\ - \end{pmatrix}$

•, ÷ SPDN

FRACTIONS: +, - COMMON  
DENOMINATOR

•  $\frac{(\text{tops} \cdot \text{tops})}{(\text{bottoms} \cdot \text{bottoms})}$  ÷ flip and multiply

①  $-12 - 9 = \boxed{-21}$

②  $-12 + 9 = \boxed{-3}$

③  $-12(9) = \boxed{-108}$

④  $-\frac{12}{9} = \boxed{-\frac{4}{3}}$

⑤  $-\frac{3}{4} - \frac{2}{3}$

$-\frac{9}{12} - \frac{8}{12} = \boxed{-\frac{17}{12}}$

⑥  $-12 \overset{+}{-} (-9)$

$-12 + 9 = \boxed{-3}$

⑦  $\frac{5}{3} \div \frac{2}{5} = \frac{5}{3} \cdot \frac{5}{2} = \boxed{\frac{25}{6}}$

⑧  $5 \div \frac{1}{2} = \frac{5}{1} \cdot \frac{2}{1} = \frac{10}{1} = \boxed{10}$

- NO MATH HELP TODAY  $\Rightarrow \frac{1}{2}$  DAY OF SCHOOL.
- RETURN HW 7 AND QUIZ 6 (graded)

What does it mean to "solve" an equation like  $x + 27 = -3$  ?

Solve an equation } means find all values (numbers) for  $x$  that, when substituted for  $x$  make a true expression. USE PARENTHESES

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We are going to use "undos" and the GRE to solve.

GRE Golden Rule of Equations

"Whatever you do to one side, do to the other."

$$\begin{array}{ccc} x + 27 & = & -3 \\ \text{LEFT SIDE} & \left\{ \begin{array}{l} \\ \\ \end{array} \right. & \text{RIGHT SIDE} \end{array}$$

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From the Golden Rule (of life)  $\Rightarrow$  "Do unto others as you would have others do unto you."

Lets look AT "undos" If I start  
WITH \$5 AND +\$2, how do I undo +\$2?

$$\begin{array}{r} \$5 \\ - \$2 \\ \hline \end{array}$$

If I start WITH \$8 AND -\$2, how to undo?

$$\begin{array}{r} \$8 \\ + \$2 \\ \hline \end{array}$$

\* Addition and subtraction undo each other.

(EX)  $X + 27 = -3$  Goal, get X by itself  
 $X = \text{some number}$   
 $\uparrow$   
 $+1X$  by itself

$$X + 27 = -3$$

$$\begin{array}{r} -27 \quad -27 \\ \hline \end{array}$$

USE GRE AND UNDO

COMPLETE EQUATION

What you "undo" to each side

$$\boxed{X = -30}$$

Solution

$$\underline{\underline{CK}} \quad X + 27 \stackrel{?}{=} -3$$

$$(-30) + 27 \stackrel{?}{=} -3$$

$$-3 \stackrel{?}{=} -3 \quad \checkmark$$

# Chapter 3-2, Solving Equations by Using Addition and Subtraction

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EX1  
Pg 129

$$\begin{array}{r} m - 48 = 29 \\ + 48 \quad + 48 \\ \hline \end{array}$$

$$\boxed{m = 77}$$

$$\begin{array}{r} \text{CK } (77) - 48 \stackrel{?}{=} 29 \\ 29 \stackrel{?}{=} 29 \checkmark \end{array}$$

EX2

$$\begin{array}{r} 21 + g = -18 \\ -21 \quad -21 \\ \hline \end{array}$$

$$\boxed{g = -39}$$

$$\begin{array}{r} \text{CK } 21 + (-39) \stackrel{?}{=} -18 \\ -18 \stackrel{?}{=} -18 \checkmark \end{array}$$

EX

$$\begin{array}{r} x - 12 = -27 \\ +12 \quad +12 \\ \hline \end{array}$$

$$\boxed{x = -15}$$

$$\begin{array}{r} \text{CK } (-15) - 12 \stackrel{?}{=} -27 \\ -27 \stackrel{?}{=} -27 \checkmark \end{array}$$

EX

$$\begin{array}{r} k + 63 = 92 \\ -63 \quad -63 \\ \hline \end{array}$$

$$\boxed{k = 29}$$

$$\begin{array}{r} \text{CK } (29) + 63 \stackrel{?}{=} 92 \\ 92 \stackrel{?}{=} 92 \checkmark \end{array}$$

EX 4  
Pg 130

$$g + \frac{3}{4} = -\frac{1}{8}$$

$$-\frac{3}{4} \quad -\frac{3}{4}$$

$$\boxed{g = -\frac{7}{8}}$$

$$\left\{ \begin{array}{l} -\frac{1}{8} - \frac{3}{4} \\ -\frac{1}{8} - \frac{6}{8} = -\frac{7}{8} \end{array} \right.$$

$$\text{CK } (-\frac{7}{8}) + \frac{3}{4} = -\frac{1}{8}$$

$$-\frac{7}{8} + \frac{6}{8} = -\frac{1}{8} \quad \checkmark$$

When writing equations from "verbal" expressions,  
Find the equals sign, then write left & right sides

EX  $\downarrow$  is, equals, is the same as,

EX 5  
Pg 130

A number increased by 5 is equal to 42

$$N + 5 = 42$$

$$-5 \qquad -5$$

$$\boxed{N = 37}$$

$$\text{CK } (37) + 5 \stackrel{?}{=} 42 \quad \checkmark$$

• Homework: Pg 131 # 4 to 10