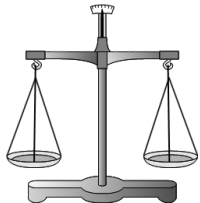


2.2 Solving One Step Equations



Equations must stay **BALANCED**...

...therefore, we have the golden rule of math...

WHATEVER YOU DO TO ONE SIDE OF AN EQUATION, YOU MUST ALSO DO TO THE OTHER SIDE!!

Sep 20-3:43 PM

inverse operations- two operations that undo each other

Addition (+) is the inverse of Subtraction (-)
 Multiplication (•) is the inverse of Division (÷)

Use these to solve equations, which means...

Isolate the variable on one side of the equation.

Sep 20-3:52 PM

Addition/Subtraction

1. $x - 5 = -13$ $+5 \quad +5$ $x = -8$	2. $k + 7 = -12$ $-7 \quad -7$ $k = -19$
3. $4 = m - (-9)$ $-9 \quad -9$ $-5 = m$	4. $8 = d + (-3)$ $+3 \quad +3$ $11 = d$

Sep 20-3:56 PM

Multiplication/Division

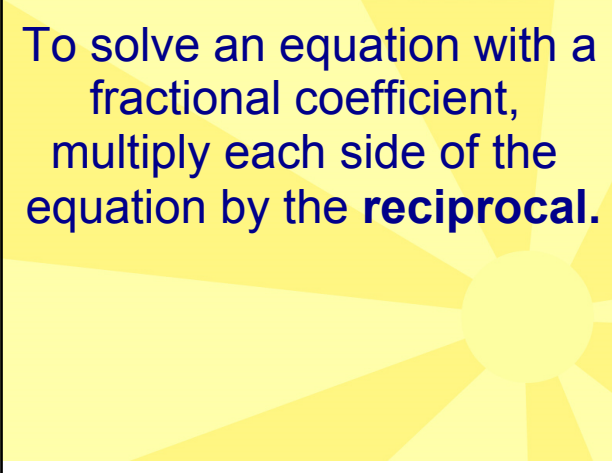
1. $6y = -30$ $\div 6 \quad \div 6$ $y = -5$	2. $-4j = -24$ $\div -4 \quad \div -4$ $j = 6$
3. $60 = 5x$ $\div 5 \quad \div 5$ $12 = x$	4. $49 = -7k$ $\div -7 \quad \div -7$ $-7 = k$

Sep 24-8:10 AM

5. $-4\left(\frac{f}{4}\right) = (-12) - 4$ $f = 48$	6. $8\left(\frac{r}{5}\right) = (-9) 5$ $r = -45$
7. $-4(-2) = \left(\frac{r}{-4}\right) - 4$ $8 = r$	8. $3\left(\frac{e}{-3}\right) = (5) - 3$ $e = -15$

Sep 24-8:14 AM

To solve an equation with a fractional coefficient, multiply each side of the equation by the **reciprocal**.



Sep 24-8:16 AM

Solve:

$\frac{\cancel{8} 2}{\cancel{2} 3} x = \frac{6}{1} \cdot \frac{3}{\cancel{2}}$ $X = 18$	$\frac{\cancel{8} 3}{\cancel{3} 5} x = \frac{7}{1} \cdot \frac{5}{\cancel{3}}$ $x = 35$
$\frac{\cancel{4} 1}{\cancel{4} 4} x = 5 \cdot \frac{4}{1}$ $x = 20$	$\frac{\cancel{8} 4}{\cancel{4} 3} x = \frac{16}{1} \cdot \frac{3}{\cancel{4}}$ $x = 48$

Aug 31-3:23 PM

Classwork: p.87 #4 - 48 (4's)
 Copy the question.
 Show work.

We will continue with notes in 20 minutes.

Sep 5-7:54 AM

2.3 Solving Two-step Equations

Steps

- Undo addition or subtraction.
- Undo multiplication or division.

EXAMPLE:

$$3x + 7 = -8$$

-7	-7
3x	= -15
3	3
x	= -5

Sep 6-2:58 PM

Examples:

<p>1. $2x + 3 = 15$</p> $\begin{array}{r} \cancel{2}x + 3 = 15 \\ -3 \quad -3 \\ \hline 2x = 12 \\ \hline x = 6 \end{array}$	<p>2. $6x - 15 = 9$</p> $\begin{array}{r} 6x - 15 = 9 \\ +15 \quad +15 \\ \hline 6x = 24 \\ \hline x = 4 \end{array}$
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Feb 4-8:06 AM

<p>3. $\frac{x}{7} - 4 = -11$</p> $\begin{array}{r} \frac{x}{7} - 4 = -11 \\ +4 \quad +4 \\ \hline \frac{x}{7} = -7.7 \\ \hline x = -49 \end{array}$	<p>4. $\frac{y}{2} + 5 = 1$</p> $\begin{array}{r} \frac{y}{2} + 5 = 1 \\ -5 \quad -5 \\ \hline \frac{y}{2} = -4 \\ \hline y = -8 \end{array}$
---	--

Feb 4-8:06 AM

<p>5. $\frac{(x+7)}{4} = 6$</p> $\begin{array}{r} \frac{x+7}{4} = 6 \\ \hline x+7 = 24 \\ -7 \quad -7 \\ \hline x = 17 \end{array}$	<p>6. $\frac{(4-y)}{3} = 8$</p> $\begin{array}{r} \frac{4-y}{3} = 8 \\ \hline 4-y = 24 \\ -4 \quad -4 \\ \hline -y = 20 \\ \hline y = -20 \end{array}$
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Sep 27-10:10 AM

Collect Like Terms

7. $3k - k = 42$

$$\frac{2k}{2} = \frac{42}{2}$$

$$k = 21$$

8. $13 = 12t - 3t$

$$\frac{13}{9} = \frac{9t}{9}$$

$$\frac{13}{9} = t$$

Feb 4-8:07 AM

Word problem. A delivery person weighs 160 lbs and each box of books weighs 50 lbs. The maximum capacity of the elevator is 1000 lbs. How many boxes of books can the delivery person bring on the elevator?

Let x = # of boxes

$$50x + 160 \leq 1000$$

$$-160 \quad -160$$

$$\frac{50x}{50} \leq \frac{840}{50}$$

$$x \leq 16.8$$

16 boxes

Aug 31-3:31 PM

Classwork: p.94 #4-20,28-34 even

Copy the question.

Show work.

Turn in with p.87.

Sep 5-7:54 AM