

## What's Going On?

**Checking In**

**Minds on**

Number telepathy

**Action!**

Clicking EDIT-UNDO

**Consolidation**

Whiteboard

**Learning Goal - I will be able to solve simple equations!**

## Minds on

### Number telepathy

Pick a number from 1 to 10, but don't tell me what it is.

Multiply it by 2.

Add 4.

What's the number you end up with?

## Minds on

### Number telepathy

Pick a number from 1 to 10, but don't tell me what it is.

Multiply it by 2.

Add 4.

$$? \times 2 + 4$$

How did I know what numbers people picked?

$$(22 - 4) \div 2$$

**Minds on**

If you pick a number between -10 and 10,  
add 9 to it,  
and the answer you get is 2...  
What was the original number?

$$? + 9 = 2$$

## Minds on

In algebra, we don't talk about "psychic skills" - we talk about "solving for  $x$ ".

$$\begin{array}{r} x + 4 = 7 \\ -4 \quad \underline{-4} \\ 3 \end{array}$$

**Minds on**

Solve It!

$$\frac{4x}{4} = \frac{16}{4}$$

$$x = 4$$

**Minds on**

Solve It!

$$\frac{3x}{3} = \frac{-9}{3}$$

$$x = -3$$

**Minds on**

Solve It!

$$\frac{-2x}{-2} = \frac{8}{-2}$$
$$(-2)(-4) = +8$$
$$x = -4$$



**Action!**

Click Edit-Undo!!

$$2x - 7 = 9$$

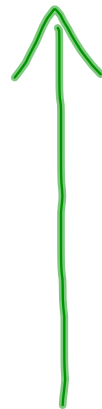
What happens to  $x$ , in what order?  
Think of BEDMAS.

Brackets: no

Exp: no

M/D:  $\times 2$

A/S:  $-7$



$$9 + 7 = 16$$

$$16 \div 2 = 8$$

**Action!**

Click Edit-Undo!!  
(aka Reverse Order of Operations)

$$2x - 7 = 9$$

$$\begin{array}{r} 2x - 7 = 9 \\ +7 \quad +7 \end{array}$$

$$\frac{2x}{2} = \frac{16}{2}$$

$$x = 8$$

## Consolidation

### Whiteboards - Level 1!

$$y - 7 = 5$$

$$+7 \quad +7$$

$$y + 0 = 12$$

$$y = 12$$

## Consolidation

Whiteboards - Level 1!

$$x + 4 = 14$$

$$\begin{array}{r} -4 \quad -4 \\ \hline x + 4 = 14 \\ \hline x + 0 = 10 \end{array}$$

$$x = 10$$

## Consolidation

Whiteboards - Level 1!

$$\begin{array}{r} \cancel{6}w = 24 \\ \hline \cancel{6} \quad 6 \\ 1w = 4 \\ w = 4 \end{array}$$

## Consolidation

Leveling Up:

$$2t + 8 = 20$$

$$\begin{array}{r} -8 \quad -8 \\ \hline 2t + 0 = 12 \\ t = 6 \end{array}$$

## Consolidation

Whiteboards - Level 2!

$$\frac{x}{2} + 4 = 14$$

$$-4 \quad -4$$

$$\frac{x}{2} + 0 = 10$$

$$\cancel{2} \left( \frac{x}{\cancel{2}} \right) = (10) \times 2$$

$$x = 20$$

**Consolidation**

Whiteboards - Level 2!

$$6y - 7 = 5$$

*Handwritten work:*

$$\begin{array}{l} \cancel{-7} \quad +7 \\ 6y = 12 \\ \hline y = 2 \end{array}$$

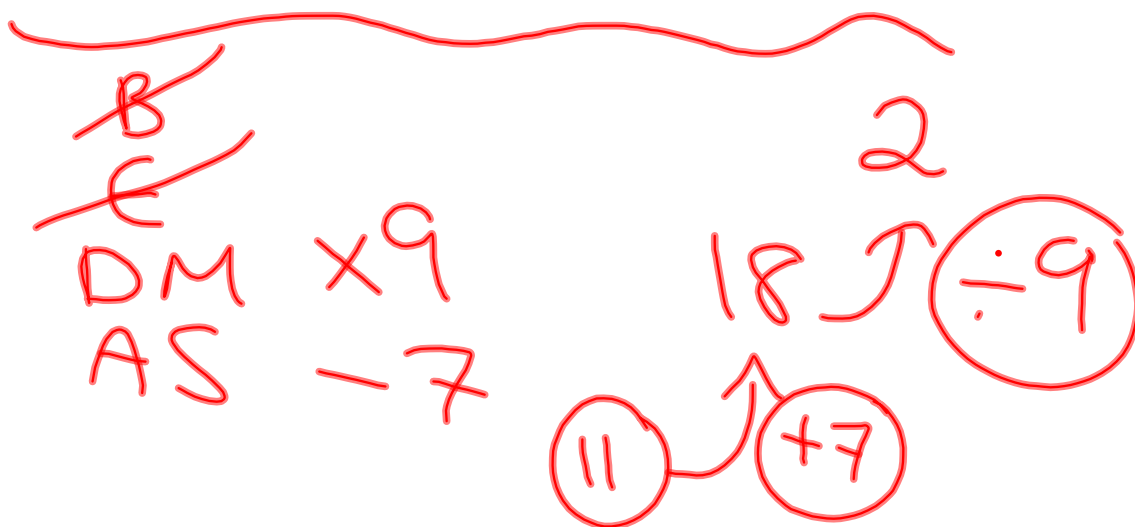
$\rightarrow y = 2$



**Consolidation**

Whiteboards - Level 2!

$$9b - 7 = 11$$



**Consolidation**

Whiteboards - Level 2!

$$9b - 7 = 11$$
$$+ 7 \quad + 7$$

$$\frac{9b}{9} = \frac{18}{9}$$

$$b = 2$$

## Consolidation

### Whiteboards - Level 2!

$$12g + 5 = 17$$

~~B~~  
~~E~~  
 DM  
 AS

$\times 12$        $\div 12$   
 $+ 5 \rightarrow 17$        $- 5$

$$12g + 5 = 17$$

$$\begin{array}{r} \cancel{+5} \\ -5 \end{array}$$

$$12g = 17 - 5$$

$$12g = 12$$

$$g = 1$$

## Consolidation

### Whiteboards - Level 2!

$$\begin{array}{r}
 3c + 12 = 0 \\
 \hline
 3c = -12 \\
 \hline
 c = -4
 \end{array}
 \quad
 \begin{array}{l}
 | \\
 B \\
 E \\
 DM \times 3 \\
 AS + 12 \\
 |
 \end{array}$$

**Consolidation**

Whiteboards - Level 2!

$$\begin{array}{r} 5x + 3 = 14 \\ \quad \quad \quad \cancel{+3} \quad \quad \quad \cancel{-3} \\ \hline 5x = 11 \\ x = \frac{11}{5} \end{array}$$

## Consolidation

Bonus challenge:

$$\begin{aligned}
 2(p + 6) - 7 &= 11 \\
 &\quad +7 \quad +7 \\
 2(p+6) &= 11+7 \\
 \frac{2(p+6)}{2} &= \frac{18}{2} \\
 \underline{p+6} &= 9 \\
 p+6 &= 9 \\
 &\quad +6 \quad -6 \\
 p &= 3
 \end{aligned}$$

$$\begin{aligned}
 &\boxed{B+6} \\
 &\swarrow \\
 &\text{DM. } \boxed{\times 2} \\
 &\text{AS } \boxed{-7} \\
 &\quad \uparrow
 \end{aligned}$$

## Consolidation

Bonus challenge:

$$2(p + 6) - 7 = 11$$

$$2p + 12 - 7 = 11$$

$$2p + 5 = 11$$

$$2p = 11 - 5$$

$$p = \frac{6}{2}$$

$$p = 3$$

## Consolidation

# Homework!!!

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