

8+1

### Solving 1-Step Equations

When solving equations, our job is to ISOLATE the variable by UNDOING what is being done to it, in the OPPOSITE order it is being done in.

Ex:)  $n + 5 = 2$

Do	Undo
+5	-5

$$\frac{n + 5}{-5} = \frac{2}{-5}$$

$$\boxed{n = -3}$$

Ex:)  $w - (-7) = -15$

Do	Undo
+7	-7

$$w + 7 = -15$$

$$\frac{w + 7}{-7} = \frac{-15}{-7}$$

$$\boxed{w = -22}$$

Ex:)  $-6 = u - 11$

Do	Undo
-11	+11

$$\frac{-6}{+11} = \frac{u - 11}{+11}$$

$$\boxed{5 = u}$$

Ex:)  $-25 = z + (-13)$

Do	Undo
-13	+13

$$-25 = z - 13$$

$$\frac{-25}{+13} = \frac{z - 13}{+13}$$

$$\boxed{-12 = z}$$

Ex:)  $\frac{f}{-5} = 8(-5)$

Do	Undo
$\div(-5)$	$\times(-5)$

$$\frac{f}{-5} = -40$$

$$\boxed{f = -40}$$

### Remember Order of Operations

PARENTHESES

EXPONENTS

MULTIPLY DIVIDE

ADD SUBTRACT

Ex:)  $\frac{-72}{-9} = \frac{-9t}{-9}$

Do	Undo
$\times(-9)$	$\div(-9)$

$$\frac{-72}{-9} = \frac{-9t}{-9}$$

$$\boxed{8 = t}$$

### Solving 2-Step Equations

Ex:)  $-4b + 8 = -20$

<del>-8</del>	<del>-8</del>
<del>-4b</del>	<del>-28</del>
<del>-4</del>	<del>-4</del>

$b = 7$

Do	Undo
$\times(-4)$	$-8 \checkmark$
$+8$	$\div(-4) \checkmark$

Ex:)  $\frac{g}{-2} - 6 = -14$

<del>-6</del>	<del>-6</del>
<del>+6</del>	<del>+6</del>

$g = 16$

Do	Undo
$\div(-2)$	$+6 \checkmark$
$-6$	$\times(-2)$

Ex:)  $\frac{x-3}{7} = -9(7)$

<del>7</del>	<del>-63</del>
<del>x-3</del>	<del>-63</del>
<del>+3</del>	<del>+3</del>

$x = -60$

Do	Undo
$\times 7 \checkmark$	$-3$
$\div 7$	$+3$

Ex:)  $\frac{-9(a-4)}{-9} = \frac{-27}{-9}$

<del>-9</del>	<del>-27</del>
<del>a-4</del>	<del>3</del>
<del>+4</del>	<del>+4</del>

$a = 7$

Do	Undo
$\div(-9) \checkmark$	$-4$
$\times(-9)$	$+4$

Ex:)  $10 = 6m - 2$

<del>-2</del>	<del>-2</del>
<del>12</del>	<del>6m</del>
<del>6</del>	<del>6</del>

$2 = m$

Do	Undo
$\times 6 \checkmark$	$+2$
$-2$	$\div 6$

Ex:)  $-40 = \frac{j}{-2} + 20$

<del>-20</del>	<del>-20</del>
<del>-20</del>	<del>-20</del>

$120 = j$

Do	Undo
$\div(-2) \checkmark$	$-20$
$+20$	$\times(-2)$

Ex:)  $\frac{8-1r}{-8} = \frac{-7}{-8}$

<del>-8</del>	<del>-8</del>
<del>-1r</del>	<del>-15</del>
<del>-</del>	<del>-1</del>

$r = 15$

Do	Undo
$\times(-1) \checkmark$	$-8$
$+8$	$\div(-1)$

Ex:)  $-11 = -9 + (-g)$

<del>-9</del>	<del>-9</del>
<del>+9</del>	<del>+9</del>
<del>-2</del>	<del>-1g</del>
<del>-1</del>	<del>-1</del>

$2 = g$

Do	Undo
$\times(-1) \checkmark$	$+9$
$-9$	$\div(-1)$