Algebra 2 Warm-up - 1.2

1. Evaluate $60n(2-n)$ when $n=3$

$60 \cdot 3(2-3)$
$= 180(-1)$
$= -180$

2. Evaluate $4-b^2$ when $b=-2$

$4-(-2)^2$
$= 4-4$
$= 0$

3. Simplify $23-3\cdot 6\div 9$

$23-3\cdot 6\div 9$
$= 23-18\div 9$
$= 23-2$
$= 21$

18) $x = 0$

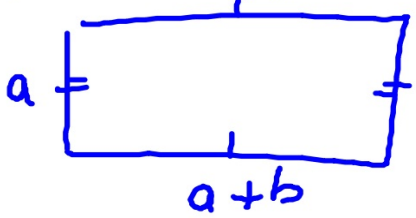
$12x \div (x-1)$

$= 12 \cdot 0 \div (0-1)$

$= 0 \div (-1)$

$= 0$

46) $a = 5, b = 4$



$A = LW$

$= (a+b)a$

$A = (5+4)5$

$= 9 \cdot 5$

$= 45$

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~~8/30~~ - Solving Linear Equations

What transformations produce equivalent equations?

1. Add a # to both sides
2. Subtract a # from both sides
3. Multiply each side by a #
4. Divide each side by a #
5. Simplify one or both sides
6. Exchange sides

Solve $\frac{2}{5}x + 7 = 13$

(1) Option 1

Get rid of fractions first

$\frac{2}{5}x + 7 = 13$ (multiply by 5)

$2x + 35 = 65$

$-35 \quad -35$

$\frac{2x}{2} = \frac{30}{2}$

$x = 15$

(2) Option 2

Leave the fraction

$\frac{2}{5}x + 7 = 13$

$-7 \quad -7$

$\frac{5}{2} \cdot \frac{2}{5}x = 6 \cdot \frac{5}{2}$

$x = 15$

Solve $8x + 15 = -4x + 51$

$+4x \quad +4x$

$12x + 15 = 51$

$-15 \quad -15$

$\frac{12x}{12} = \frac{36}{12}$

$x = 3$

Solve $15(1-x) = -3(-x-2)$

$15 - 15x = 3x + 6$

$+15x \quad +15x$

$15 = 18x + 6$

$-6 \quad\quad -6$

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

$\frac{1}{2} = x$

Solve $\frac{1}{3}(14x+9) = 11 - 5(x-3)$

$3 \cdot \frac{14}{3}x + 3 \cdot 3 = 3 \cdot 11 - 3 \cdot 5x + 3 \cdot 15$

$14x + 9 = 33 - 15x + 45$

$14x + 9 = 78 - 15x$

$+15x \qquad +15x$

$29x + 9 = 78$

$-9 \quad -9$

$\frac{29x}{29} = \frac{69}{29}$

$x = \frac{69}{29}$

Steps

1. Clear ( )
2. Combine like terms
3. Clear fractions
4. Get variable on one side
5. Undo +/−
6. Undo ×

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