U4L5 Equations with Brackets

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(A) Review

1) $4m - 8 = 6$

$+8 \quad +8$

$\frac{4m}{4} = \frac{14}{4}$

$m = \frac{14}{4}$

$m = \frac{7}{2}$ OR 3.5 ✓

2) Letters = Numbers

$7n + 6 = 4n - 6$

$-4n \quad -4n$

$3n + 6 = -6$

$-6 \quad -6$

$\frac{3n}{3} = \frac{-12}{3}$

$n = -4$ ✓

3) Letters = Numbers

$5A - 2A = 5A - 8$

$3A = 5A - 8$

$-5A \quad -5A$

$\frac{-2A}{-2} = \frac{-8}{-2}$

$A = +4$ ✓

(B) Eq'n w/ Brackets

multiply... EXPANDING gets rid of brackets!!!

EX 1) $2(x+2) = -6$

$2x + 4 = -6$

$-4 \quad -4$

$\frac{2x}{2} = \frac{-10}{2}$

$x = -5$ ✓

Check $2(x+2) \neq -6$

$2(-5+2) \mid -6$

$2(-3) \mid -6$

$-6 \mid -6$ YES!!

EX 2) $2(x-3) - 5 = 13 - 4x$

$2x - 6 - 5 = 13 - 4x$

$+4x \quad +4x$

$2x - 11 = 13$

$+11 \quad +11$

$\frac{6x}{6} = \frac{24}{6}$

$x = 4$ ✓

★ Expand
★ Collecting
★ make letters & numbers on opposite sides

EX 3) $3(2x-5) - (x+3) = 2(x+1) + 4$

$6x - 15 - 1x - 3 = 2x + 2 + 4$

Letters = Numbers

$5x - 18 = 2x + 6$

$-2x \quad -2x$

$3x - 18 = 6$

$+18 \quad +18$

$3x = 24$

$$\frac{3x}{3} = \frac{24}{3}$$

$$\boxed{x = 8}$$ ✓

U4L5 WKST 1,5,9,13,17,21,25,29,33AB /10 mks