

3.4 Solving Equations w/ ~~Multip~~ (x) or (÷)

EQ.: How to use inverse operations to isolate a variable w/ a coefficient.

Multiplication is the inverse of division.

Ex 1 $-4y = 18$ ← multiply

(÷) (÷) is inverse to (x)

$$\frac{-4y}{-4} = \frac{18}{-4}$$

$y = -4.5$

$-\frac{1}{4}$

$\begin{array}{r} \times 4.5 \\ -4 \overline{) 18.0} \\ \underline{-16} \\ 20 \end{array}$

Ex 3 What if the coefficient is a fraction?

$\frac{2}{3}x = -14$

$x = -21$

$-\frac{14}{1} \div \frac{2}{3} = -14 \cdot \frac{3}{2} = -21$

Ex 2 $\frac{x}{3} = -6$

divide solve w/ (x)

$\frac{x}{3} = -6(3)$

$x = -18$

$\frac{x}{3} \rightarrow \frac{1}{3}x$

same

Ex 4 $-\frac{4}{5}x = -8$ ← multiply by the reFLIP-racal

$(-\frac{5}{4})(-\frac{4}{5}x) = -8(\frac{5}{4})$

$+x = +10$

Ex. 5

The record low temp. in (H) is ~~scribble~~
 12°F . This is 1.5 times the record
low temp. in (A). What is the record
low temp. in A? $A = \text{lowest temp. in (A)}$

$$12 = -1.5A$$

$$12 = -1.5A$$
$$-1.5 \quad -1.5$$
$$\underline{-80^{\circ}\text{F} = A}$$

$$\begin{array}{r} \times 80 \\ -15 \overline{) 1200} \\ \underline{120} \\ 00 \end{array}$$