

ALG 1: RATIONAL NUMBERS

Fri 8/31 Notes

- ✓ • Distributive Property
- ✓ • Combine Like Terms

① $2x + 4(-x + 3) = 18$

$2x + (-4x) + 12 = 18$

$$\begin{array}{r} -2x + 12 = 18 \\ \underline{-12} \quad \quad -12 \\ -2x = 6 \\ \underline{-2} \quad \quad -2 \\ x = -3 \end{array}$$

Check

$$2(-3) + 4[(-3) + 3] = 18$$

$$2(-3) + 4(-3 + 3) = 18$$

$$-6 + 4(0) = 18$$

$$-6 + 24 = 18$$

$$18 = 18 \checkmark$$

$$\frac{24}{36} \quad \frac{36}{24}$$

② (Fraction as multiplier)

ditch the fractions

Multiply both sides by reciprocal of the fraction!

$$\frac{5}{2} \cdot \frac{2}{5} (6x - 8) = \frac{-5}{1} \cdot \frac{5}{2}$$

$$\begin{array}{r} 6x - 8 = -25 \\ \underline{+8} \quad \quad +8 \\ 6x = -17 \\ \underline{6} \quad \quad 6 \\ x = -\frac{17}{6} \end{array}$$

also $-2\frac{5}{6}$

Check

$$\frac{2}{5} [4(-\frac{17}{6}) - 8] = -10$$

$$\frac{2}{5} [-17 + 8] = -10$$

$$\frac{2}{5} (-9) = -10$$

$$-10 = -10 \checkmark$$