

23. Simplify : $\frac{x-3}{7}$

→ $\frac{\frac{x+8}{x}}$

Rewrite

$\frac{x-3}{7} \div \frac{x+8}{x}$

$\frac{x-3}{7} \cdot \frac{x}{x+8}$

$= \frac{x(x-3)}{7(x+8)}$

24. Solve for x:
$$\frac{3x^2}{+8x+1} = \frac{-8/x-1}{+8/x+1}$$

$$3x^2 + 8x + 1 = 0$$

$$a = 3 \quad b = 8 \quad c = 1$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-8 \pm \sqrt{8^2 - 4(3)(1)}}{2(3)}$$

$$= \frac{-8 \pm \sqrt{64 - 12}}{6} = \frac{-8 \pm \sqrt{52}}{6}$$

52
↑
26 · 2
↑
2 · 13

$$= \frac{-8 \pm 2\sqrt{2 \cdot 13}}{6}$$

$$= \frac{-8 \pm 2\sqrt{13}}{6} = \frac{2(-4 \pm \sqrt{13})}{6}$$

$$= \frac{-4 \pm \sqrt{13}}{3}$$