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36. $9n^2 - 27n^4$

GCF $9n^2(1 - 3n^2)$

32. $4p + 12p^3$

GCF $4p^1(1 + 3p^2)$

34. $m^4 - 6m^2$

$m^2(m^2 - 6)$

6.4 Rational Numbers

Solve

$$\frac{4}{1} \cdot \frac{x}{4} = 8 \cdot 4$$

Multiplication
Property of
Equality

$$\frac{4x}{4}$$

$$x = 32$$

$$\frac{x}{4} = 8$$

$$\frac{1x}{4} = 8$$

$$\frac{1}{4} \cdot \frac{x}{1} = 8$$

$$\frac{1}{4} \quad 4$$

$$\frac{4}{1} \cdot \frac{1}{4} x = 8 \cdot 4$$

Reciprocal

$$x = 32$$

$$\frac{2}{3}x = b$$

$$\frac{2}{3}x$$

$$\frac{2}{3}x$$

$$\frac{3}{2} \cdot \frac{2}{3}x = \frac{3}{1} \cdot \frac{b}{2}$$

$$x = 9$$

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

$$x = 10$$

$$5 \cdot \frac{1}{5}x = 2 \cdot 5$$

$$x = 10$$

$$\frac{4}{3} \cdot \frac{3}{4} x = \frac{6}{1} \cdot \frac{4}{3}$$

Reciprocal

$$x = 8$$

Proportion

$$\frac{x}{5} = \frac{3}{15}$$

Diagram showing the process of multiplying both sides of the proportion by 3. A red arc labeled "x3" connects the numerator 'x' to the denominator '15'. A red arrow labeled "x3" points from the denominator '5' to the denominator '15'.

Easy

~~$$\frac{x}{5} = \frac{3}{15}$$~~

Set
Cross Products
= to
each other

$$15x = 5(3)$$

$$\frac{15x}{15} = \frac{15}{15}$$

$$x = 1$$

$$\cancel{\frac{x}{2} = \frac{3}{9}}$$

$$\frac{x}{2} = \frac{3}{9}$$

$$9x = 2(3)$$

$$\frac{2}{3} = \frac{3}{9}$$

$$9x = \frac{6}{9}$$

$$x = \frac{6}{9}$$

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

p 355

8-30 E

$$-\frac{2}{3} \quad -\frac{3}{2}$$

Reciprocal