

## Simplifying Rational Expressions

Simplify each expression.

$$1) \frac{x-3}{x^2+x-12} = \frac{\cancel{(x-3)}}{\cancel{(x-3)}(x+4)}$$

$$2) \frac{81r^2}{27r+9}$$

$$3) \frac{10a-40}{a-4}$$

$$4) \frac{4v}{4v^2+12v}$$

$$5) \frac{60n}{70n^2-100n}$$

$$6) \frac{x^2-14x+40}{x^2-x-12}$$

$$7) \frac{20p-32}{12p-12}$$

$$8) \frac{9n+12}{15n+24}$$

$$9) \frac{k^2 - 7k - 8}{k^2 + 10k + 9}$$

$$10) \frac{x^2 + 16x + 60}{x^2 + 18x + 80}$$

$$11) -\frac{28r}{16r^2}$$

$$12) \frac{32x^5}{20x^4}$$

$$13) \frac{64m^4}{80m^3}$$

$$14) \frac{40x}{45x^3}$$

$$15) \frac{12n^3}{10n^2}$$