

Simplifying Rational Expressions

Simplify each expression.

$$1) \frac{a^2 - 3a - 4}{a^2 - 13a + 36}$$

$$2) \frac{6n + 15}{21n + 24}$$

$$3) \frac{2p^2 + 15p + 18}{2p^2 + 3p - 54}$$

$$4) \frac{5a^2 + 16a + 12}{2a^2 + 3a - 2}$$

$$5) \frac{18p^3 + 12p^2 - 96p}{30p^3 + 72p^2 + 24p}$$

$$6) \frac{18x^3 + 81x^2 + 63x}{63x^3 + 9x^2 - 54x}$$

$$7) \frac{6k^3 + 4k^2 - 80k}{21k^3 + 63k^2 - 84k}$$

$$8) \frac{63 + 40b - 7b^2}{7b^2 - 50b + 7}$$

$$9) \frac{3n^3 - 3n^2 - 3n + 3}{2n^2 - 9n + 7}$$

$$10) \frac{14v^3 - 136v^2 + 90v}{14v^2 - 138v + 108}$$

Answers to Simplifying Rational Expressions

$$1) \frac{a+1}{a-9}$$

$$2) \frac{2n+5}{7n+8}$$

$$3) \frac{2p+3}{2p-9}$$

$$4) \frac{5a+6}{2a-1}$$

$$5) \frac{(3p+8)(p-2)}{(5p+2)(p+2)}$$

$$6) \frac{2x+7}{7x-6}$$

$$7) \frac{2(3k-10)}{21(k-1)}$$

$$8) \frac{(9+7b) \cdot -1}{7b-1}$$

$$9) \frac{3(n+1)(n-1)}{2n-7}$$

$$10) \frac{v(7v-5)}{7v-6}$$