



Simplifying Algebraic Expressions

Name _____

Score _____

SAE:19

Simplify each expression.

1)
$$\frac{5x^4y^2z^6}{10y^7z^2} \times 2xy^5z$$

2)
$$\frac{2x^2 - x - 6}{8x^2 + 2x - 15} \times \frac{4x^2 - 13x + 10}{5(x - 2)^2}$$

3)
$$\frac{a^2 - 16}{2a^2 - 3a - 20} \times \frac{4a^5 - 25a^3}{2a^2 + 3a - 20}$$

4)
$$\frac{p^7q^6r^2}{7p^2r^3} \div \frac{2q^3}{14p^3qr}$$

5)
$$\frac{t^3}{t^2 - t - 30} \div \frac{t^4}{t^2 + 4t - 5}$$

6)
$$u^6vw^2 \div uvw^3$$



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Answer key

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Simplify each expression.

$$1) \quad \frac{5x^4y^2z^6}{10y^7z^2} \times 2xy^5z$$

$$x^5z^5$$

$$2) \quad \frac{2x^2 - x - 6}{8x^2 + 2x - 15} \times \frac{4x^2 - 13x + 10}{5(x - 2)^2}$$

$$\frac{1}{5}$$

$$3) \quad \frac{a^2 - 16}{2a^2 - 3a - 20} \times \frac{4a^5 - 25a^3}{2a^2 + 3a - 20}$$

$$a^3$$

$$4) \quad \frac{p^7q^6r^2}{7p^2r^3} \div \frac{2q^3}{14p^3qr}$$

$$p^8q^4$$

$$5) \quad \frac{t^3}{t^2 - t - 30} \div \frac{t^4}{t^2 + 4t - 5}$$

$$\frac{t - 1}{t^2 - 6t}$$

$$6) \quad u^6vw^2 \div uvw^3$$

$$\frac{u^5}{w}$$