



Simplifying Algebraic Expressions

Name _____

Score _____

SAE:21

Simplify each expression.

1) $8m^6n^2 \div 6m^4n^3$

2) $\frac{5p^2 + 4p - 12}{p^2 - 4} \div \frac{5p - 6}{p - 2}$

3) $\frac{7z^2 + 14z^3}{2z^2 + 11z + 15} \times \frac{3 - 5z - 2z^2}{1 - 4z^2}$

4) $\frac{12}{p^2q^6r^4} \times \frac{p^8q^7r^6}{6}$

5) $3b^2cd^5 \times 2bc^2d$

6) $\frac{k^2 - 6k + 8}{3k} \div \frac{k^2 - 4}{9k^2}$



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Answer key

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Simplify each expression.

1) $8m^6n^2 \div 6m^4n^3$

$$\frac{4m^2}{3n}$$

2) $\frac{5p^2 + 4p - 12}{p^2 - 4} \div \frac{5p - 6}{p - 2}$

1

3) $\frac{7z^2 + 14z^3}{2z^2 + 11z + 15} \times \frac{3 - 5z - 2z^2}{1 - 4z^2}$

$$\frac{7z^2}{5 + 2z}$$

4) $\frac{12}{p^2q^6r^4} \times \frac{p^8q^7r^6}{6}$

$$2p^6qr^2$$

5) $3b^2cd^5 \times 2bc^2d$

$$6b^3c^3d^6$$

6) $\frac{k^2 - 6k + 8}{3k} \div \frac{k^2 - 4}{9k^2}$

$$\frac{3k^2 - 12k}{k + 2}$$