

Simplifying Rational Expressions Revisited

Date _____ Period _____

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Simplify each expression.

1) $\frac{45x^2}{35x^3}$

2) $\frac{21a^2}{28a}$

3) $\frac{8k}{14k^2}$

4) $\frac{9x}{9x-3}$

5) $\frac{x^2 - 6x - 7}{x + 1}$

6) $\frac{n^2 + 8n + 15}{n^2 + 4n + 3}$

7) $\frac{m^2 + 2m - 35}{m^2 + m - 42}$

8) $\frac{3x + 18}{2x^2 + 6x - 36}$

9)
$$\frac{n^2 - 9n + 20}{n^3 - 10n^2 + 25n}$$

10)
$$\frac{35n^2}{50n}$$

11)
$$\frac{20b}{28b^2}$$

12)
$$\frac{32r}{40r + 48}$$

13)
$$\frac{70x^2 - 100x}{20x}$$

14)
$$\frac{p^2 - 6p - 16}{6p^2 + 12p}$$

15)
$$\frac{x^2 + 17x + 72}{x^2 - 2x - 80}$$

16)
$$\frac{n^2 - 7n - 8}{n^2 - 5n - 6}$$

17)
$$\frac{x^2 + 10x + 21}{9x^3 + 18x^2 - 27x}$$

18)
$$\frac{v^2 + v - 12}{2v^2 + 4v - 30}$$

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Simplify each expression.

1) $\frac{45x^2}{35x^3}$

$$\frac{9}{7x}$$

2) $\frac{21a^2}{28a}$

$$\frac{3a}{4}$$

3) $\frac{8k}{14k^2}$

$$\frac{4}{7k}$$

4) $\frac{9x}{9x-3}$

$$\frac{3x}{3x-1}$$

5) $\frac{x^2-6x-7}{x+1}$

$$x-7$$

6) $\frac{n^2+8n+15}{n^2+4n+3}$

$$\frac{n+5}{n+1}$$

7) $\frac{m^2+2m-35}{m^2+m-42}$

$$\frac{m-5}{m-6}$$

8) $\frac{3x+18}{2x^2+6x-36}$

$$\frac{3}{2(x-3)}$$

$$9) \frac{n^2 - 9n + 20}{n^3 - 10n^2 + 25n}$$

$$\frac{n - 4}{n(n - 5)}$$

$$10) \frac{35n^2}{50n}$$

$$\frac{7n}{10}$$

$$11) \frac{20b}{28b^2}$$

$$\frac{5}{7b}$$

$$12) \frac{32r}{40r + 48}$$

$$\frac{4r}{5r + 6}$$

$$13) \frac{70x^2 - 100x}{20x}$$

$$\frac{7x - 10}{2}$$

$$14) \frac{p^2 - 6p - 16}{6p^2 + 12p}$$

$$\frac{p - 8}{6p}$$

$$15) \frac{x^2 + 17x + 72}{x^2 - 2x - 80}$$

$$\frac{x + 9}{x - 10}$$

$$16) \frac{n^2 - 7n - 8}{n^2 - 5n - 6}$$

$$\frac{n - 8}{n - 6}$$

$$17) \frac{x^2 + 10x + 21}{9x^3 + 18x^2 - 27x}$$

$$\frac{x + 7}{9x(x - 1)}$$

$$18) \frac{v^2 + v - 12}{2v^2 + 4v - 30}$$

$$\frac{v + 4}{2(v + 5)}$$