

Simplifying Rational Expressions

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Simplify each and state the excluded values.

1) $\frac{12k^2}{12k}$

2) $\frac{20x}{10x^2}$

3) $\frac{25x^2}{10x^3}$

4) $\frac{10n^3}{20n^2}$

5) $\frac{n-2}{n^2-7n+10}$

6) $\frac{6m}{6m^2-3m}$

7) $\frac{p-3}{p^2-2p-3}$

8) $\frac{6}{15x+15}$

9) $\frac{5-r}{r^2-4r-5}$

10) $\frac{10m^2}{10m+10}$

11) $\frac{3x+3}{x+1}$

12) $\frac{20n^2-4n}{20n}$

13) $\frac{5v^2+10v}{2v^2+6v+4}$

14) $\frac{5b^2+8b-4}{3b^2+10b+8}$

15) $\frac{12x^3-12x^2-24x}{12x^3+4x^2-8x}$

16) $\frac{5x^3+17x^2-12x}{4x^3+8x^2-32x}$

Answers to Simplifying Rational Expressions (ID: 1)

1) $k; \{0\}$

2) $\frac{2}{x}; \{0\}$

3) $\frac{5}{2x}; \{0\}$

4) $\frac{n}{2}; \{0\}$

5) $\frac{1}{n-5}; \{5, 2\}$

6) $\frac{2}{2m-1}; \left\{0, \frac{1}{2}\right\}$

7) $\frac{1}{p+1}; \{3, -1\}$

8) $\frac{2}{5(x+1)}; \{-1\}$

9) $-\frac{1}{r+1}; \{5, -1\}$

10) $\frac{m^2}{m+1}; \{-1\}$

11) $3; \{-1\}$

12) $\frac{5n-1}{5}; \{0\}$

13) $\frac{5v}{2(v+1)}; \{-2, -1\}$

14) $\frac{5b-2}{3b+4}; \left\{-2, -\frac{4}{3}\right\}$

15) $\frac{3(x-2)}{3x-2}; \left\{0, \frac{2}{3}, -1\right\}$

16) $\frac{5x-3}{4(x-2)}; \{0, 2, -4\}$