

Simplifying Rational Expressions HW

Period _____

Simplify each and state the excluded values.

1) $-\frac{18a^2}{63a}$

2) $\frac{12n^2}{24n^3}$

3) $\frac{18n}{12n^2}$

4) $-\frac{3m^5}{15m}$

5) $\frac{x+3}{2x+6}$

6) $\frac{m+2}{4m+8}$

7) $\frac{x-5}{9x^2-45x}$

8) $\frac{30m}{50m+40}$

$$9) \frac{21a - 14}{14a + 42}$$

$$10) \frac{x^2 - 16x + 60}{x^2 - x - 30}$$

$$11) \frac{a^2 - 7a + 12}{a^2 + 7a - 30}$$

$$12) \frac{a^2 + 11a + 30}{a^2 + 12a + 35}$$

$$13) \frac{6n^2 + 12n}{21n^3 + 48n^2 + 27n}$$

$$14) \frac{10v^2 - 28v + 16}{10v^2 - 32v + 24}$$

$$15) \frac{2b^3 - 24b^2 + 64b}{9b^2 - 90b + 144}$$

$$16) \frac{3x^2 - 6x - 24}{2x^2 - 26x + 72}$$

Answers to Simplifying Rational Expressions HW

1) $-\frac{2a}{7}; \{0\}$

2) $\frac{1}{2n}; \{0\}$

3) $\frac{3}{2n}; \{0\}$

4) $-\frac{m^4}{5}; \{0\}$

5) $\frac{1}{2}; \{-3\}$

6) $\frac{1}{4}; \{-2\}$

7) $\frac{1}{9x}; \{0, 5\}$

8) $\frac{3m}{5m+4}; \left\{-\frac{4}{5}\right\}$

9) $\frac{3a-2}{2(a+3)}; \{-3\}$

10) $\frac{x-10}{x+5}; \{6, -5\}$

11) $\frac{a-4}{a+10}; \{3, -10\}$

12) $\frac{a+6}{a+7}; \{-7, -5\}$

13) $\frac{2(n+2)}{(n+1)(7n+9)}; \left\{0, -1, -\frac{9}{7}\right\}$

14) $\frac{5v-4}{5v-6}; \left\{2, \frac{6}{5}\right\}$

15) $\frac{2b(b-4)}{9(b-2)}; \{8, 2\}$

16) $\frac{3(x+2)}{2(x-9)}; \{9, 4\}$