Algebra 2 Name_____

Chap 9 Practice Test, IA Ver 1

Date_____ Period____

Simplify each and state the excluded values.

1) $\frac{30a}{50a^2}$

2) $\frac{b^2 - 5b - 36}{6b^3 + 18b^2 - 24b}$

3) $\frac{2n(n-6)}{2n} \cdot \frac{2n^2}{(n-1)(n-6)}$

4) $\frac{56n + 32}{n^2 - 36} \cdot \frac{3n^2 - 18n}{21n^2 + 12n}$

5) $\frac{2(n+8)}{2} \quad \frac{4n(n+10)}{n+10}$

6) $\frac{7x + 28}{2x^3 + 18x^2} \quad \frac{7x + 14}{x^2 + 11x + 18}$

Simplify each expression.

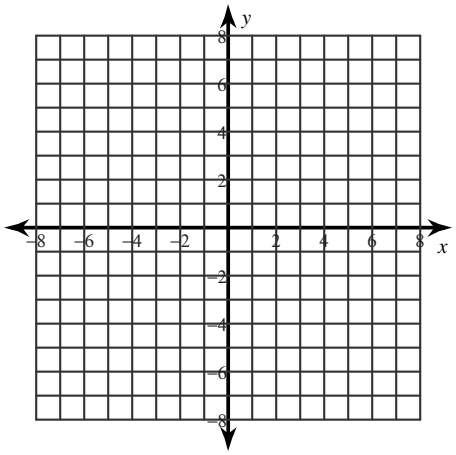
7) $\frac{3}{20x^4y} + \frac{5x + 4y}{20x^4y}$

8) $\frac{5}{2x} + \frac{5x}{4x^2 + 8x}$

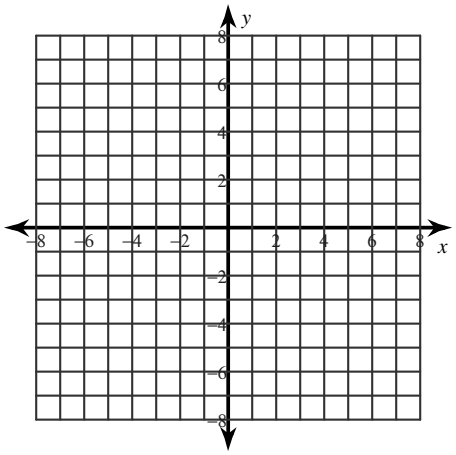
9) $\frac{a+4}{2a-4} - \frac{3a}{4a^2}$

Graph each function.

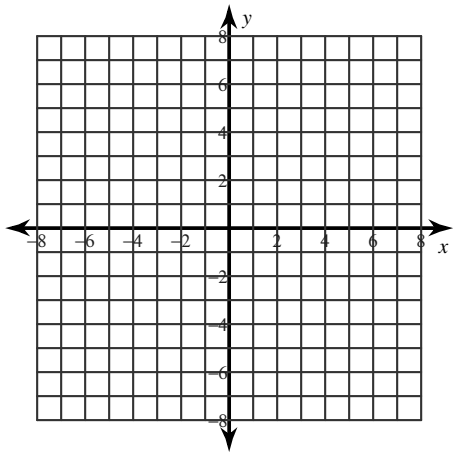
10) $f(x) = -\frac{4}{x} - 2$



11) $f(x) = \frac{x^2 - 3x - 4}{-4x}$



12) $f(x) = \frac{x^3 + x^2 - 12x}{4x^2 - 16}$



Solve each equation. Remember to check for extraneous solutions.

13) $\frac{1}{n^2} + \frac{n+1}{n^2} = \frac{6}{n}$

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

15) $\frac{1}{m^3 + 2m^2} - \frac{m+5}{m^2} = \frac{1}{m}$

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Simplify each and state the excluded values.

1) $\frac{30a}{50a^2}$

$\frac{3}{5a}$; $\{0\}$

2) $\frac{b^2 - 5b - 36}{6b^3 + 18b^2 - 24b}$

$\frac{b - 9}{6b(b - 1)}$; $\{0, -4, 1\}$

3) $\frac{2n(n - 6)}{2n} \cdot \frac{2n^2}{(n - 1)(n - 6)}$

$\frac{2n^2}{n - 1}$; $\{0, 1, 6\}$

4) $\frac{56n + 32}{n^2 - 36} \cdot \frac{3n^2 - 18n}{21n^2 + 12n}$ $\frac{8}{n + 6}$; $\left\{-6, 6, 0, -\frac{4}{7}\right\}$

5) $\frac{2(n + 8)}{2}$ $\frac{4n(n + 10)}{n + 10}$

$\frac{n + 8}{4n}$; $\{-10, 0\}$

6) $\frac{7x + 28}{2x^3 + 18x^2}$ $\frac{7x + 14}{x^2 + 11x + 18}$ $\frac{x + 4}{2x^2}$; $\{0, -9, -2\}$

Simplify each expression.

7) $\frac{3}{20x^4y} + \frac{5x + 4y}{20x^4y}$

$\frac{3 + 5x + 4y}{20x^4y}$

8) $\frac{5}{2x} + \frac{5x}{4x^2 + 8x}$

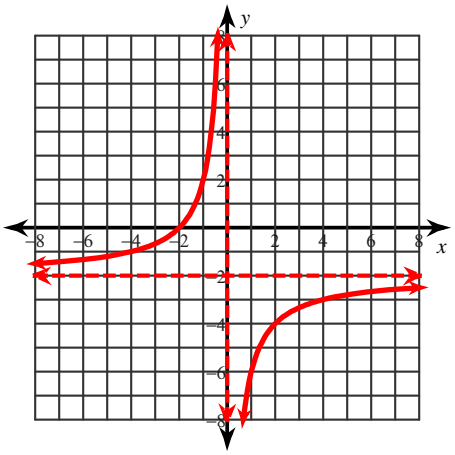
$\frac{15x + 20}{4x(x + 2)}$

9) $\frac{a + 4}{2a - 4} - \frac{3a}{4a^2}$

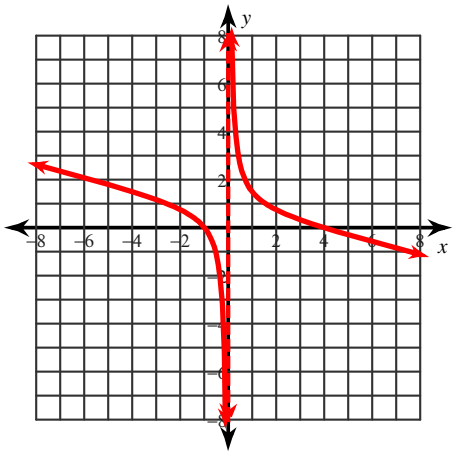
$\frac{2a^2 + 5a + 6}{4a(a - 2)}$

Graph each function.

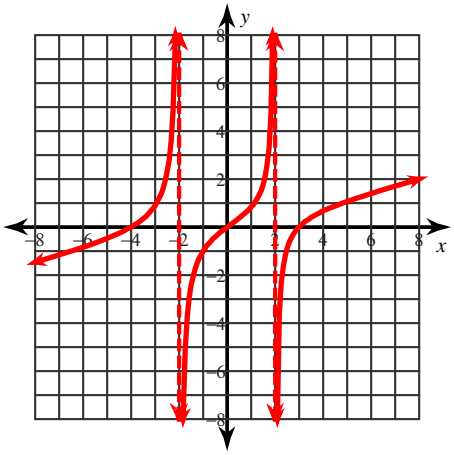
10) $f(x) = -\frac{4}{x} - 2$



11) $f(x) = \frac{x^2 - 3x - 4}{-4x}$



12) $f(x) = \frac{x^3 + x^2 - 12x}{4x^2 - 16}$



Solve each equation. Remember to check for extraneous solutions.

13) $\frac{1}{n^2} + \frac{n+1}{n^2} = \frac{6}{n}$

$\left\{\frac{2}{5}\right\}$

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

$\{-11\}$

15) $\frac{1}{m^3 + 2m^2} - \frac{m+5}{m^2} = \frac{1}{m}$ $\left\{-3, -\frac{3}{2}\right\}$