Algebra 2 Name_____ ID: 1

Quiz Review

Date_____ Period____

Simplify each and state the excluded values.

1) $\dfrac{10x + 40}{25x + 20}$

2) $\dfrac{2x - 4}{10x - 20}$

3) $\dfrac{25a^2 - 15a}{15a^2 + 30a}$

4) $\dfrac{5n^2 - 48n + 64}{3n^2 - 28n + 32}$

Simplify each expression.

5) $\dfrac{5n^3 + 15n^2}{n + 1} \cdot \dfrac{10}{5n^3 + 15n^2}$

6) $2m^2 \cdot \dfrac{7m}{7m^2 - 7m}$

7) $\dfrac{8v}{8v^3 - 80v^2} \div \dfrac{v - 4}{8v^3 - 32v^2}$

8) $\dfrac{v - 6}{v^2 - 9v - 10} \div \dfrac{1}{v - 10}$

9) $\dfrac{20x + 50}{3x^2 + 18x + 27} \div \dfrac{2x + 5}{27x + 81}$

10) $\dfrac{21k^2 - 4k - 12}{15k + 10} \div \dfrac{42k - 36}{5k + 5}$

11) $\dfrac{2b}{2a} - \dfrac{2a}{5a}$

12) $\dfrac{5y}{6x^2} + \dfrac{5y}{3x}$

13) $\dfrac{3b}{b + 4} - \dfrac{4}{6}$

14) $\dfrac{4}{r + 1} + \dfrac{3r}{3}$

15) $\dfrac{4}{n + 3} + \dfrac{2}{3n + 15}$

16) $\dfrac{3}{n + 4} - \dfrac{3}{n - 6}$

17) $\dfrac{5}{4n + 16} - \dfrac{6}{n - 7}$

18) $\dfrac{7p}{7p^2 - 23p + 6} + \dfrac{4p}{8}$

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Simplify each and state the excluded values.

1) $\frac{10x+40}{25x+20}$

$\frac{2(x+4)}{5x+4}$; $\left\{-\frac{4}{5}\right\}$

2) $\frac{2x-4}{10x-20}$

$\frac{1}{5}$; $\{2\}$

3) $\frac{25a^2-15a}{15a^2+30a}$

$\frac{5a-3}{3(a+2)}$; $\{0, -2\}$

4) $\frac{5n^2-48n+64}{3n^2-28n+32}$

$\frac{5n-8}{3n-4}$; $\left\{8, \frac{4}{3}\right\}$

Simplify each expression.

5) $\frac{5n^3+15n^2}{n+1} \cdot \frac{10}{5n^3+15n^2}$ $\frac{10}{n+1}$

6) $2m^2 \cdot \frac{7m}{7m^2-7m}$ $\frac{2m^2}{m-1}$

7) $\frac{8v}{8v^3-80v^2} \div \frac{v-4}{8v^3-32v^2}$ $\frac{8v}{v-10}$

8) $\frac{v-6}{v^2-9v-10} \div \frac{1}{v-10}$ $\frac{v-6}{v+1}$

9) $\frac{20x+50}{3x^2+18x+27} \div \frac{2x+5}{27x+81}$ $\frac{90}{x+3}$

10) $\frac{21k^2-4k-12}{15k+10} \div \frac{42k-36}{5k+5}$ $\frac{k+1}{6}$

11) $\frac{2b}{2a} - \frac{2a}{5a}$

$\frac{5b-2a}{5a}$

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

$\frac{5y+10yx}{6x^2}$

13) $\frac{3b}{b+4} - \frac{4}{6}$

$\frac{7b-8}{3(b+4)}$

14) $\frac{4}{r+1} + \frac{3r}{3}$

$\frac{r^2+r+4}{r+1}$

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

$\frac{14n+66}{3(n+5)(n+3)}$

16) $\frac{3}{n+4} - \frac{3}{n-6}$

$-\frac{30}{(n-6)(n+4)}$

17) $\frac{5}{4n+16} - \frac{6}{n-7}$

$\frac{-19n-131}{4(n-7)(n+4)}$

18) $\frac{7p}{7p^2-23p+6} + \frac{4p}{8}$

$\frac{20p+7p^3-23p^2}{2(p-3)(7p-2)}$