

Use for MATHO review

Name _____

Date _____

Period _____

Write questions on board using variable "x"

Key

Simplify each and state the excluded values.

1) $-\frac{60m^3}{18m^2}$ ✓
 $-\frac{10m}{3}; \{0\}$

2) $\frac{14r^2 - 70r}{56r^2}$ ✓
 $\frac{r-5}{4r}; \{0\}$

3) $\frac{2r^2 + 2r - 4}{r^2 + 10r + 16}$ ✓
 $\frac{2(r-1)}{r+8}; \{-2, -8\}$

Simplify each expression.

4) $\frac{2b}{3} \cdot \frac{10}{4b} \left(\frac{5}{3}\right)$ ✓

5) $\frac{1}{v+7} \cdot \frac{v^2 + v - 30}{v+6} \left(\frac{v-5}{v+7}\right)$ ✓

6) $\frac{x^2 - 3x - 54}{x^2 + 13x + 42} \cdot \frac{1}{x-2} \left(\frac{x-9}{(x+7)(x-2)}\right)$ ✓

7) $\frac{n^2 - 2n - 15}{5n^2 + 40n} \cdot \frac{5n^2 + 35n}{n^2 + 10n + 21} \left(\frac{n-5}{n+8}\right)$ ✓

8) $\frac{9a^2 - 27a}{63a^2 - 81a} \div \frac{10a^2}{28a - 36} \left(\frac{2(a-3)}{5a^2}\right)$ ✓

9) $\frac{8}{4-v} \div \frac{9v^2 + 45v}{v-4} \left(\frac{8}{9v(v+5)}\right)$ ✓

10) $\frac{x^2 - 13x + 30}{x^2 - 5x + 6} \div \frac{x-10}{x+2} \left(\frac{x+2}{x-2}\right)$ ✓

11) $\frac{8}{2x} \div \frac{5x}{10} \left(\frac{8}{x^2}\right)$ ✓

12) $\frac{u+6v}{30v^4} + \frac{u-v}{30v^4}$ ✓
 $\frac{2u+5v}{30v^4}$

13) $\frac{5}{4k+8} + \frac{k-2}{4k+8}$ ✓
 $\frac{3+k}{4k+8} \cdot \frac{x+3}{4(x+2)}$

14) $\frac{5}{p+3} + \frac{4}{3p+6}$ ✓
 $\frac{19p+42}{3(p+2)(p+3)}$

15) $\frac{2x}{2} + \frac{6y}{2x^2y}$ ✓
 $\frac{x^3+3}{x^2}$

16) $\frac{5m+5}{2m^2+m-1} - \frac{m+4}{2m^2+m-1}$ ✓
 $\frac{4m+1}{2m^2+m-1} \cdot \frac{4x+1}{(2x-1)(x+1)}$

17) $\frac{n-1}{2n-2} - \frac{5n}{2n^2}$ ✓
 $\frac{n-5}{2n}$

~~2~~ $\frac{-2}{-1} \cdot \frac{2m^2+2m-1}{2m(m+1)-1(m+1)}$
 $\frac{2m^2+2m-1}{(2m-1)(m+1)}$

$$18) \frac{3}{x-1} - \frac{2}{x+5}$$

$$\frac{x+17}{(x+5)(x-1)} \checkmark$$

$$20) \frac{v-4}{7v+56} \div \frac{v^2-2v-63}{v^2+15v+56} \left(\frac{v-4}{7(v-9)} \right) \checkmark$$

$$22) \frac{\frac{25}{4}}{\frac{1}{x} - \frac{x^2}{4}} \left(\frac{25x}{4-x^3} \right) \checkmark$$

$$19) \frac{9}{8n^2} \div \frac{8n}{7} \left(\frac{63}{64n^3} \right) \checkmark$$

$$21) \frac{x-8}{80x-10x^2} \div \frac{3x^2}{10x^2-30x} \left(\frac{(x-3)}{3x^2} \right) \checkmark$$

$$23) \frac{\frac{2}{u^2}}{\frac{2u}{u-1}} \left(\frac{u-1}{u^3} \right) \checkmark$$

$$24) \frac{5x+3}{x-2} - \frac{x-4}{2-x}$$

$$\frac{5x+3}{x-2} + \frac{x-4}{x-2}$$

$$\left(\frac{6x-1}{x-2} \right) \checkmark$$