

Review Topics WS #1

Simplify each and state the excluded values.

1) $\frac{k+9}{5k^2+49k+36}$

2) $\frac{2x^2-5x-3}{x-3}$

3) $\frac{50x}{70x+10}$

4) $\frac{8n^2-80n}{n-10}$

5) $\frac{18n^2+9n}{10n+5} \cdot \frac{n-5}{9n}$

6) $\frac{6n+48}{8} \cdot \frac{1}{n+8}$

7) $\frac{15p-27}{p+9} \cdot \frac{p+10}{27-15p}$

8) $\frac{9m}{60m-6m^2} \cdot \frac{m^2-4m-60}{9m}$

9) $\frac{a-2}{a^2-5a+6} \div \frac{1}{a^2-6a+9}$

10) $\frac{m^2+4m+3}{m+3} \div \frac{1}{m-7}$

11) $\frac{k^2+5k+4}{8k^3+8k^2} \div \frac{k+10}{8k^2}$

12) $\frac{n-6}{n^2-9n+14} \div \frac{1}{n-2}$

13) $\frac{2x}{8x-20} \div \frac{x+1}{5-2x}$

14) $\frac{1}{3x-1} \div \frac{35x}{7-20x-3x^2}$

15) $\frac{2b^2+10b}{2b} \div \frac{3b}{b-4}$

16) $\frac{1}{2x} \div \frac{7-2x}{2x^2+5x-42}$

Simplify each expression (No Excluded Values Required for these problems).

17) $\frac{3x-5}{3x-18} - \frac{6}{3}$

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

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

20) $\frac{6k+5}{3k-9} - \frac{5}{2}$

Answers to Review Topics WS #1

$$1) \frac{1}{5k+4}; \left\{-9, -\frac{4}{5}\right\}$$

$$5) \frac{n-5}{5}; \left\{-\frac{1}{2}, 0\right\}$$

$$9) a-3; \{3, 2\}$$

$$12) \frac{n-6}{n-7}; \{7, 2\}$$

$$16) \frac{-x-6}{2x}; \left\{0, \frac{7}{2}, -6\right\}$$

$$20) \frac{-3k+55}{6(k-3)}$$

$$2) 2x+1; \{3\}$$

$$6) \frac{3}{4}; \{-8\}$$

$$10) (m-7)(m+1); \{-3, 7\}$$

$$13) -\frac{x}{2(x+1)}; \left\{\frac{5}{2}, -1\right\}$$

$$17) \frac{-3x+31}{3(x-6)}$$

$$3) \frac{5x}{7x+1}; \left\{-\frac{1}{7}\right\}$$

$$7) \frac{-p-10}{p+9}; \left\{-9, \frac{9}{5}\right\}$$

$$11) \frac{k+4}{k+10}; \{0, -1, -10\}$$

$$14) \frac{-7-x}{35x}; \left\{\frac{1}{3}, -7, 0\right\}$$

$$18) \frac{-8x-17}{6(x-2)}$$

$$4) 8n; \{10\}$$

$$8) \frac{-m-6}{6m}; \{0, 10\}$$

$$15) \frac{(b-4)(b+5)}{3b}; \{0, 4\}$$

$$19) -\frac{14}{(x-3)(x+4)}$$