

Assignment

Date _____ Period _____

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Simplify each expression.

1) $\frac{5}{2p+4} + \frac{2p}{2}$

2) $\frac{2}{3k} - \frac{5k+5}{2k+12}$

3) $\frac{3}{x+1} - \frac{3}{x-6}$

4) $\frac{5}{5n-4} - \frac{6}{n-1}$

5) $\frac{15r}{15} \div \frac{16r^2}{7}$

6) $\frac{5m^5}{2} \div \frac{18}{2}$

7) $\frac{2n^2}{8n} \div \frac{n^2 - 13n + 42}{-n^2 + 13n - 42}$

8) $\frac{x-4}{6x^2-30x} \div \frac{1}{x^2-10x+25}$

Solve each equation. Remember to check for extraneous solutions.

9) $\frac{1}{4a^2} + \frac{1}{a} = \frac{1}{4a}$

10) $\frac{1}{k} = \frac{1}{k^2} - \frac{1}{2k}$

11) $\frac{6}{x-5} = \frac{1}{x-8} - \frac{1}{x^2-13x+40}$

12) $\frac{3m-6}{4m^2+6m} + \frac{4}{2m^2+3m} = \frac{1}{m}$

Simplify each expression.

13) $\frac{4}{6n} - \frac{n-2}{2n-3}$

14) $\frac{8m^2}{8m^2-48m} \div \frac{1}{8m}$

Solve each equation. Remember to check for extraneous solutions.

15) $\frac{1}{2p^2} + \frac{p-6}{2p^2} = \frac{p+2}{p^2}$

Factor each completely.

16) $4k^4 - 20k^3$

17) $4n^2 - 8n - 192$

18) $3x^2 - 3x$

19) $5n^2 + 10n$

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Simplify each expression.

1) $\frac{5}{2p+4} + \frac{2p}{2} \frac{2p^2+4p+5}{2(p+2)}$

2) $\frac{2}{3k} - \frac{5k+5}{2k+12} \frac{-11k+24-15k^2}{6k(k+6)}$

3) $\frac{3}{x+1} - \frac{3}{x-6} - \frac{21}{(x+1)(x-6)}$

4) $\frac{5}{5n-4} - \frac{6}{n-1} \frac{-25n+19}{(5n-4)(n-1)}$

5) $\frac{15r}{15} \div \frac{16r^2}{7} \frac{7}{16r}$

6) $\frac{5m^5}{2} \div \frac{18}{2} \frac{5m^5}{18}$

7) $\frac{2n^2}{8n} \div \frac{n^2-13n+42}{-n^2+13n-42} - \frac{n}{4}$

8) $\frac{x-4}{6x^2-30x} \div \frac{1}{x^2-10x+25} \frac{(x-4)(x-5)}{6x}$

Solve each equation. Remember to check for extraneous solutions.

9) $\frac{1}{4a^2} + \frac{1}{a} = \frac{1}{4a} \left\{ -\frac{1}{3} \right\}$

10) $\frac{1}{k} = \frac{1}{k^2} - \frac{1}{2k} \left\{ \frac{2}{3} \right\}$

11) $\frac{6}{x-5} = \frac{1}{x-8} - \frac{1}{x^2-13x+40} \left\{ \frac{42}{5} \right\}$

12) $\frac{3m-6}{4m^2+6m} + \frac{4}{2m^2+3m} = \frac{1}{m} \left\{ -4 \right\}$

Simplify each expression.

13) $\frac{4}{6n} - \frac{n-2}{2n-3} \frac{10n-6-3n^2}{3n(2n-3)}$

14) $\frac{8m^2}{8m^2-48m} \div \frac{1}{8m} \frac{8m^2}{m-6}$

Solve each equation. Remember to check for extraneous solutions.

15) $\frac{1}{2p^2} + \frac{p-6}{2p^2} = \frac{p+2}{p^2} \left\{ -9 \right\}$

Factor each completely.

16) $4k^4 - 20k^3$
 $4k^3(k-5)$

17) $4n^2 - 8n - 192$
 $4(n-8)(n+6)$

18) $3x^2 - 3x$
 $3x(x-1)$

19) $5n^2 + 10n$
 $5n(n+2)$