

Algebra II Review Worksheet 8.1, 8.4 & 8.5

Simplify each:

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

5) $\frac{7}{4x} + \frac{5}{4x}$

2) $\frac{4x^2y^3}{x^5y^6} * \frac{xy}{20x^3}$

6) $\frac{2x}{x-3} - \frac{x+2}{x-3}$

3) $\frac{5x^2-20}{25x^2} \div \frac{x^2+6x+8}{x^2+10x+24}$

7) $\frac{x}{x^2+x-2} + \frac{1}{x+2}$

4) $\frac{x^2+x-20}{x+1} \div \frac{33x^2-132x}{16x+16} \div \frac{8x+40}{11x+44}$

8) $\frac{3}{x+5} - \frac{4}{x+1}$

Given x & y vary inversely. ($y=k/x$) First find k and then solve the problem.

9) If $x=2$ when $y=100$, find y when $x=5$.

10) If $x=3$ when $y=0.1$, find y when $x=6$.

11) If $x=15$ when $y=-2$, find x when $y=-3$.

12) If $x=-6$ when $y=9$, find x when $y=18$.

13) The variable z varies jointly with x & y . If $x=3$ & $y=8$ when $z=6$, find z when $x=-4$ and $y=7$. (Bonus)

14) The variable z varies inversely with x & the square of y . If $x=3$ & $y=2$ when $z=6$, find z when $x=-4$ and $y=7$. (Bonus)