

$$(1) \frac{8(x-1)}{x^2-4} = \frac{4}{x+2}$$

$$(2) \frac{x+12}{3} = \frac{2x+3}{x+2}$$

$$(3) \frac{5x}{x+8} + \frac{4x-9}{x^2+5x-24}$$

$$(4) \frac{x^2-13x+40}{x^2-2x-15} \div (x^2-5x-24)$$

$$(5) \text{ graph: } y = \frac{x^2+6}{x^2-3x-40} \quad \text{D/R / } \begin{matrix} \text{Horz asy} \\ \text{vertical asy} \\ \text{x-int} \end{matrix}$$

$$(6) \text{ graph: } y = \frac{1}{x+5} + 2 \quad \text{PF, D/R, asymptotes}$$

(7) x & y vary inversely ~~write~~ write an equation
Find y when $x = -3$, and when $x = \frac{5}{2}$ $y = 18$

old

$$(8) \text{ solve: } \log_2 2x + \log_2 (x+4) = 6$$

$$(9) \text{ graph: } y = 2\left(\frac{1}{4}\right)^{x+2} - 2 \quad \text{D/R, PF}$$

10 solve: $\sqrt[3]{5x-4} = 2$

11 Inverse: $y = 4x^2 + 9 \quad x \geq 0$

12 simplify: $\sqrt{\frac{18x^5y^4}{49x^2}}$

13 x-int, y-int max min of $x^3 - 4x + 2$

14 divide $4x^4 + 29x^3 + 4x^2 + 4x^2 - 14x + 37$ by $x+7$

15 Factor $64x^3 - 8$

16 simplify: $(3x^4y^{-2})^{-3}$

17 solve: $6x^2 - 8x = 3$

18 solve: $2|3x-5| \leq -8$

19 $\sum_{i=1}^4 (i^2 - 4)$

20 $\sum_{i=1}^{\infty} \left(\frac{4}{5}\right)^{i-1}$ Hint: $S = \frac{a_1}{1-r} \quad |r| < 1$