

Are there any Homework Questions you would like to see on the board?

Last day's work:

pp. 132-133 #1, 4ac, 6cfg, 7, 8, 9ab, 10bde, 12ac, 13bc, 14cd, 15ce

Today's Homework Practice includes:

p. 134 #1 - 3, 5 - 8 [4, 9]

p. 132 #8 Factor

a) $2x^2y^4 - 6x^5y^3 + 8x^3y$

$$= 2x^2y(y^3 - 3xy^2 + 4x)$$

$$ax^{2n} + bx^n + c$$

b) $2x(x+4) + 3(x+4)$

$$= (x+4)(2x+3)$$

f) $(m-n)^2 - (2m+3n)^2$

let $w = m-n$ let $t = 2m+3n$

$$w^2 - t^2$$

$$\therefore (w-t)(w+t)$$

$$= (m-n - (2m+3n))(m-n + (2m+3n))$$

$$= (m-n-2m-3n)(m-n+2m+3n)$$

$$= (-m-4n)(3m+2n)$$

$$= -1(m+4n)(3m+2n)$$

p. 133 #13c

13. Simplify. State any restrictions on the variables.

$$c) \frac{1-x^2}{1+y} \times \frac{1-y^2}{x+x^2} \div \frac{y^3-y}{x^2}$$

$$= \frac{(1-x)(1+x)}{1+y} \times \frac{(1-y)(1+y)}{x(1+x)} \div \frac{y(y^2-1)}{x^2}$$

$$= \frac{(1-x)\cancel{(1+x)}}{\cancel{1+y}} \times \frac{(1-y)\cancel{(1+y)}}{x\cancel{(1+x)}} \times \frac{x^2}{y\cancel{(y-1)}(y+1)}$$

$$= \frac{-1(1-x) \cdot x}{y(y+1)}$$

$$= \frac{x(x-1)}{y(y+1)}$$

$$\text{or } \frac{x(1-x)}{-y(y+1)}$$

$$R: y \neq -1, 0, 1 \\ x \neq 0, -1$$

p. 133 #15e

$$e) \frac{(x-2y)^2}{x^2-y^2} \div \frac{(x-2y)(x+3y)}{(x+y)^2}$$

$$= \frac{(x-2y)\cancel{(x-2y)}}{(x-y)\cancel{(x+y)}} \cdot \frac{\cancel{(x+y)}(x+y)}{\cancel{(x-2y)}(x+3y)}$$

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

$$R: x-y \neq 0 \quad x+y \neq 0 \\ x \neq y \quad x \neq -y \\ \quad \quad \quad (or \ y \neq -x) \\ x-2y \neq 0 \quad x+3y \neq 0 \\ x \neq 2y \quad x \neq -3y$$

p. 132 4c) $2(a+b)^3$
 $= 2(a+b)(a+b)^2$
 $= (2a+2b)(a^2+2ab+b^2)$

p. 132

10d) $\frac{4x^2 - 4x - 3}{4x^2 - 9}$

$$= \frac{(2x+1)(2x-3)}{(2x-3)(2x+3)}$$

$$= \frac{2x+1}{2x+3}, \quad \text{R: } x \neq \frac{3}{2}, -\frac{3}{2}$$

$$\begin{array}{r|l} a & c \\ \hline 1 & 4 \\ 2 & 2 \end{array} \quad \begin{array}{l} 1 \\ 3 \end{array}$$

$$\begin{array}{l} 2 \cdot 1 \\ 2 \cdot 3 \end{array}$$

$$\begin{array}{l} 6 - 2 \\ = 4 \end{array}$$

$$\begin{array}{l} (2x+1) \\ (2x-3) \\ = -6+2 \\ = -4 \end{array}$$