Gest BM 1P, 14.11.2014

① a) $-4-[-8-(-7+3)]$

$= -4-[-8-(-4)] = -4-(-8+4) =$

$= -4-(-4) = -4+4 = 0$

b) $a-(b-(c-(d-e)))$

$= a-(b-(c-d+e))$

$= a-(b-c+d-e)$

$= a-b+c-d+e$

② a) $(-x^3)(-x)^3 = -x\cdot x\cdot x\cdot(-x)(-x)(-x)$

$= +x^6$

b) $-a\cdot(-a^2)^3 = -a\cdot(-a^2)(-a^2)(-a^2)$

$= +a^7$

(3)

a) $\frac{a^2-ab}{b^2-ab} = \frac{a(a-b)}{b(b-a)} = \frac{a(a-b)}{-b(a-b)} = -\frac{a}{b}$

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

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

d) $\frac{20cx-15dx+8cy-6dy}{24cx+60cy-18dx-45dy}$

$= \frac{5x(4c-3d)+2y(4c-3d)}{12c(2x+5y)-9d(2x+5y)}$

$= \frac{(5x+2y)(4c-3d)}{(12c-9d)(2x+5y)} = \frac{(5x+2y)(4c-3d)}{3(4c-3d)(2x+5y)}$

$= \frac{5x+2y}{3(2x+5y)}$

e) $\frac{x^4-16}{x^3-2x^2+4x-8} = \frac{(x^2-4)(x^2+4)}{x^2(x-2)+4(x-2)}$

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

f) $\frac{6a^2-6a-36}{3a^2-27} = \frac{6(a^2-a-6)}{3(a^2-9)} =$

$\frac{6(a+2)(a-3)}{3(a+3)(a-3)} = \frac{2(a+2)}{(a+3)}$