

October 26, 2016

$$\begin{aligned}
 (4y-7)^5 &= (4y-7)(4y-7)(4y-7)(4y-7)(4y-7) \\
 &= (16y^2 - 56y + 49)(4y-7) \\
 &= 64y^3 - 112y^2 - 224y^2 + 392y + 176y - 343 \\
 &= (64y^3 - 336y^2 + 568y - 343)(4y-7) \\
 &= 256y^4 - 448y^3 - 1344y^3 + 2252y^2 \\
 &\quad + 2352y^2 - 4116y - 1372y \\
 &\quad + 2401 \\
 &= (256y^4 - 1792y^3 + 4704y^2 - 5488y + 2401)(4y-7) \\
 &= 1024y^5 - 1792y^4 - 7168y^4 + 12544y^3 \\
 &\quad + 18816y^3 - 32728y^2 \\
 &\quad - 21982y^2 + 38416y \\
 &\quad + 9604y - 16807 \\
 &= 1024y^5 - 8960y^4 + 21360y^3 \\
 &\quad - 54880y^2 + 48020y - 16807
 \end{aligned}$$

Oct 26-9:49 AM

$$\begin{aligned}
 &(-3x^8y^2)^4 \\
 &(-3)^4 \cdot (x^8)^4 \cdot (y^2)^4 \\
 &81 \cdot x^{32} \cdot y^8
 \end{aligned}$$

$$\begin{aligned}
 f(-2) &= 5(-2)^3 + 4(-2)^2 - 6 \\
 &= 5(-8) + 16 - 6 \\
 &= (-40 + 16) - 6 \\
 &= -24 - 6 \\
 &= -30
 \end{aligned}$$

Oct 26-10:26 AM

$$\begin{aligned}
 &(4a^3 + 6ac^2 + 5c^3) - (2a^3 + 8a^2c - 7ac^2) \\
 &\cancel{4a^3} + \cancel{6ac^2} + 5c^3 - \cancel{2a^3} - \cancel{8a^2c} + \cancel{7ac^2} \\
 &2a^3 + 13ac^2 + 5c^3 - 8a^2c
 \end{aligned}$$

Oct 26-10:34 AM

6.1

$$\text{LCM}(360, 756) = 36$$

$$\begin{aligned}
 360 &= 2^3 \cdot 3^2 \cdot 5 \\
 756 &= 2^2 \cdot 3^3 \cdot 7 \\
 &2 \cdot 2 \cdot 3 \cdot 3 = 36
 \end{aligned}$$

Oct 26-10:38 AM