Must have read receipt when submit work to be graded.

Part #1

$$(x^3y^2)^2 = x^{3\cdot 2}y^{2\cdot 2} = x^6y^4$$

future

$$\frac{x^4}{x^2} = x^{4-2} = x^2$$

Now

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

PA #2

$(-2+1=-1)$ NO NOT REQUIRE

2 stop adding term

$m=-1$ $\quad m=1 \quad m=2$

$$\boxed{\sum_{m=-2} \frac{6k}{m^2} = \frac{6k}{m^2} + \frac{6k}{m^2} + \frac{6k}{m^2} + \frac{6k}{m^2} + \frac{6k}{m^2}}$$

$m=-2 \quad (+1) \quad (+1) \quad m=0$

best not to do

$(-1+1=0)$ does not.

$\frac{3}{2}k + 6k + \cancel{\infty} + 6k + \frac{3}{2}k = 12 + \frac{6}{2}k = 15k$

$$= \frac{6k}{(-2)^2} + \frac{6k}{(-1)^2} + \frac{6k}{0^2} + \frac{6k}{1^2} + \frac{6k}{2^2}$$

$$= \frac{6k}{4} + \frac{6k}{1} + \infty + 6k + \frac{6k}{4}$$

No solution

stop adding when $n=4$

$$= 4\left(\frac{6k}{(n+1)^2}\right) = \frac{24k}{(n+1)^2} \quad \text{NO!}$$

$$\sum_{n=1}^{4} \frac{6k}{(n+1)^2} = \frac{6k}{(1+1)^2} + \frac{6k}{(2+1)^2} + \frac{6k}{(3+1)^2} + \frac{6k}{(4+1)^2}$$

$n=1$ ← counter

$n=1$ $\quad n=2$ $\quad n=3$ $\quad n=4$ ✓

Plug each term in sum

$$= \frac{6k}{(1+1)^2} + \frac{6k}{(2+1)^2} + \frac{6k}{(3+1)^2} + \frac{6k}{(4+1)^2}$$

$$= \frac{6k}{4} + \frac{6k}{9} + \frac{6k}{16} + \frac{6k}{25}$$

$$= \frac{3}{2}k + \frac{2}{3}k + \frac{3}{8}k + \frac{6}{25}k$$

$$= \frac{3}{2^2} + \frac{2}{3^2} + \frac{3}{5^2} + \frac{6}{25}$$

$$= \frac{900 + 400 + 225 + 144}{600} = \frac{1669}{600}$$

$$\frac{2}{9}+\frac{4}{16}+\frac{12}{25}+\frac{48}{36}=$$

$2(i!)$ not $(2i)!$

$$\sum_{i=1}^{4}\frac{2i!}{(i+2)^2}$$

$$=\frac{2\cdot 1!}{(1+2)^2}+\frac{2\cdot 2!}{(2+2)^2}+\frac{2\cdot 3!}{(3+2)^2}+\frac{2\cdot 4!}{(4+2)^2}$$

$i=1$ $i=2$ $i=3$ $i=4$

$$=\frac{2(1!)}{3^2}+\frac{2(2!)}{4^2}+\frac{2(3!)}{5^2}+\frac{2(4!)}{6^2}$$

Chp 2

How many seconds in seven days?

7 days ⟶ # [sec]

$$7\ \text{days} \times \frac{24\ \text{hr}}{1\ \text{day}} \times \frac{60\ \text{min}}{1\ \text{hr}} \times \frac{60\ \text{sec}}{1\ \text{min}} = 604800\ [\text{sec}]$$

2484 [inches] ⟶ how many miles' in 2484 inches?

inches ⟶ miles

$$2484\,[\text{in}] \cdot \frac{1}{12}\,\frac{[\text{ft}]}{[\text{in}]} \cdot \frac{1}{5280}\,\frac{\text{miles}}{\text{ft}} = .0392045\ [\text{miles}]$$

$2484 \cdot \frac{1}{12} = 207\ [\text{ft}]$

5280 ft per mile

$$2484\,[\text{in}] \cdot \frac{1\,[\text{ft}]}{12\,[\text{in}]} \cdot \frac{1\,[\text{yd}]}{3\,[\text{ft}]} \cdot \frac{1}{1760}\,\frac{\text{mile}}{[\text{yd}]}$$

yd

$$= .0342045\overline{45}\ [\text{miles}]$$

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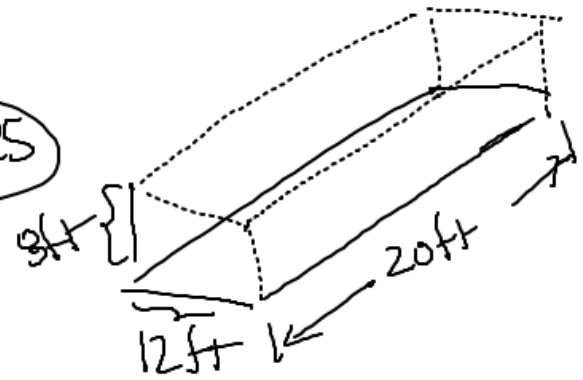
#25



units!

$(20\,ft)(12\,ft) = 240\,[ft^2]$

$20\,ft \times 12\,ft \times 9\,ft = 1920\,[ft^3]$

$240\,ft^2 \times 9\,ft = 1920\ ft^3$

(b) answer

ft