Question of the Day

The average human heart rate is 72 beats per minute (bpm). How many heart beats would the average human have in a week? Write your answer in scientific notation.

72/min

60min → hr

24hr → day

7days → week

72 × 60 = 4320 in an hour

4320 × 24 = 103680 in a day

103680 × 7 = 725760.

7.2576×10^5

1. a) $6x^2 + 14x + 8$ b) $2a^4 + 2a^2b + a^2c + bc$

2. a) $x^2 + x - 12$ b) $2x^4 - 7x^2 + 6$ c) $x^2 - 4x + 4$

d) $a^4b^2 - 1$ e) $4x^2 + 12x + 9$ f) $x^4y^2 - a^2$

3. $2x^3 + x^2 - 6x$

2.a) $(x-3)(x+4)$

F x^2 $+1-3x$

O $+4x$ $L-12$

e) $(2x+3)^2 = (2x+3)(2x+3)$

$(x^2y+a)(yx^2-a)$

$x^4y^2 - ax^2y + ayx^2 - a^2$

$x^4y^2 - a^2$

$x(x+2)(2x-3)$

$l \times w \times h$ $2x^3$

$x(x+2) = x^2+2x$ $(2x-3)x$

$(x^2+2x)(2x-3)$ x^3+4x^2-6x

$= 2x^3 - 3x^2 + 4x^2 - 6x$

$= 2x^3 + x^2 - 6x$

$(2^x)^y = 2^{xy}$

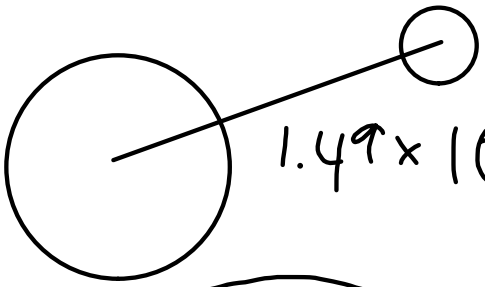
p. 88 #26

Given that it takes the Earth 365.256 days to completely orbit the sun, find:

a) The distance, in metres, that the Earth travels in 150 days.

b) The number of days it takes the Earth to travel

9 230 000 000 km.



1.49×10^{10} km

$2\pi r$

$2 \times \pi \times 1.49 \times 10^{10}$

$= 9.36 \times 10^{10}$ km

10^3

1000 9.36×10^{13} m

m → km

$$\frac{9.36 \times 10^{13}}{365.256} = \frac{X}{150}$$

$3.84 \times 10^{13} = X$

or

$\times 10^{13} = X$

p. 98 #12

Thomas has a rectangular garden of x m by 4x m. To increase his production, he increases the garden's width by (3x - 2) m and its length by (x + 1)m. Find an algebraic expression corresponding to:

a) The area of the enlarged garden.

b) Half the area of the enlarged garden.

c) Quadruple the area of the initial garden decreased by 10.

HW p. 87 #22, 23, p. 99 #19