

Monday

A profit function for a new business follows the function $P(x) = \frac{1}{3}x^2 - 6x$, where x represents the number of months. After how many months will the company begin to make a profit?

a. 2 b. 9 c. 12 d. 18

Tuesday

The length of a violin string varies inversely as the frequency of its vibrations. A violin string 15 inches long vibrates at a frequency of 450 cycles per second. Which equation can be used to calculate the frequency, F , of a violin string with length l ?

- a. $F = \frac{6750}{l}$
b. $F = \frac{30}{l}$
c. $F = 6750l$
d. $F = 30l$

Wednesday

Which is an example of an even function?

- a. $f(x) = x^4 - 2x^2 + 7$
b. $f(x) = 2x + 4x^2$
c. $f(x) = 2(x - 4)^2 - 2$
d. $f(x) = 2x^3$

Thursday

Which is an example of an odd function?

- a. $f(x) = 3x^3 - 5$
b. $f(x) = 3x^3 - 5x + 2$
c. $f(x) = 3x^3 - x$
d. $f(x) = 3x^3 - x - 1$

Friday

The value, V , of a car can be modeled by the function $V(t) = 13,000(0.82)^t$, where t is the number of years since the car was purchased. To the nearest tenth of a percent, what is the monthly rate of depreciation? After about how many years will the car be worth \$5000.