Bellwork Alg 2A Thursday, February 9, 2017

Round answers to the nearest hundredth.

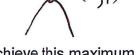
- 1. A company wants to maximize their profit. The following equation models the company's profit as a function of the number of hours each week their plant is operating. P(h) = -0.15 / (2 + 37.8 / n + 4250)
- a) Find the company's maximum profit
- b) Find the number of hours each week the plant should be operating in order to achieve this maximum profit.
- 2. An object is shot into the air with an initial velocity of 184 ft/sec from the to of a 50 foot building. The following equation models the height(ft) of the object as a function of the amount of time(sec) after it was first shot into the air: $f(t) = -16t^2 + 184t + 50$
- a) Find the time it takes the object to reach its maximum height.
- b) Find the maximum height of the object.

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1. A company wants to maximize their profit. The following equation models the company's profit as a function of the number of hours each week their plant is operating. $P(h) = -0.15 / n^2 + 37.8 / n + 4250$

a) Find the company's maximum profit y-coord of vertex



b) Find the number of hours each week the plant should be operating in order to achieve this maximum Y-word of Vertex profit.

LOS:
$$h = \frac{-37.8}{2(-0.15)} = 126$$

2. An object is shot into the air with an initial velocity of 184 ft/sec from the to of a 50 foot building. The following equation models the height(ft) of the object as a function of the amount of time(sec) after it was first shot into the air: $h(t) = -16t^2 + 184t + 50$ (t,h)

a) Find the time it takes the object to reach its maximum height.

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$$x = \frac{-184}{2(-16)} = \frac{5.75}{5.75}$$

e maximum height of the object.

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Reach max ht.

b) Find the maximum height of the object.

of entex max
$$ht = h(5.75) = 579 ft$$
 max ht