Questions From Homework

Given.

$$\frac{dA}{dt} = -0.5 \, \text{cm/min}$$

$$\frac{dA}{dt} = 8 \, \text{Tr} \, \frac{dt}{dt}$$

$$\frac{dC}{dt} = ?$$

$$-0.5 = 8 \, \text{Tr} \, \frac{dt}{dt}$$

$$-0.5 = 3 \, \text{Tr} \, \frac{dt}{dt}$$

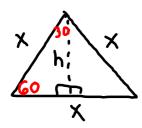
$$-0.5 = 4 \, \text{Tr} \, \frac{dt}{dt}$$

$$-0.5 = 4 \, \text{Tr} \, \frac{dt}{dt}$$

$$-0.604974 \, \text{cm/min} = \frac{dt}{dt}$$

Questions From Homework





$$\frac{X}{h} = \frac{3}{\sqrt{3}}$$

$$\frac{dx}{dt} = -\partial cm/s \qquad A = 100 cm^3$$

$$100 = \frac{4}{\sqrt{3}} \times_{9}$$

$$A = \frac{9}{1}ph$$

$$A = \frac{9}{1} \times \frac{9}{13} \times$$

$$\frac{dA}{dt} = \frac{\sqrt{3}}{3}(15.196(-3))$$

Related Rates

A man starts jogging north at a rate of 1.5 m/s and a woman starts at the same point P, at the same time jogging west at a rate of 2 m/s. At what rate is the distance between the man and the woman increasing one minute later?

(Hint: draw a diagram)

(1) Find c

$$\frac{dc}{dt} = \frac{90m}{dt} = 1.5m/s$$
 $\frac{dc}{dt} = \frac{90m}{dt} = 1.5m/s$
 $\frac{dc}{dt} = \frac{90m}{dt} = 1.5m/s$
 $\frac{dc}{dt} = \frac{90m}{dt} = \frac{90m}{dt} = \frac{90m}{dt}$
 $\frac{dc}{dt} = \frac{90m}{dt} = \frac{90$

If both are travelling away from a rommon point

IF both are travelling towards a rommon point

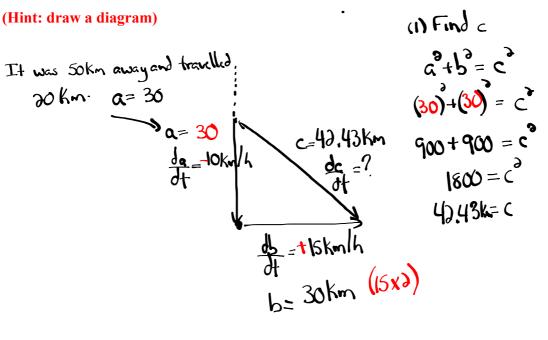
$$\frac{db}{dt} = (-)$$

$$\frac{da}{dt} = (-)$$

If one is travelling toward and the other is travelling away. The larger is positive and the smaller rate is negative

$$\frac{da}{dt} = +3$$

Ship A is 50 km north of Hawaii and sailing towards it (south) at a 10 km/h. At the same time Ship B leaves Hawaii and sails east at 15 km/h. How fast is the distance between the ships changing 2 hours later?



(11) Find
$$\frac{dc}{dt}$$
 $a^3+b^3=c^3$
 $\frac{\partial ada}{\partial t} + \frac{\partial b}{\partial t} = \frac{\partial c}{\partial t}$
 $\frac{\partial c}{\partial t} = \frac{\partial c}{\partial t}$

Jack is headed south at 60 km/h towards JMH and Jill is headed west towards the school at 50 km/h. At what rate is the distance between them closing when Jack is 2 km and Jill is 3 km from the school?

(Hint: draw a diagram)

Homework