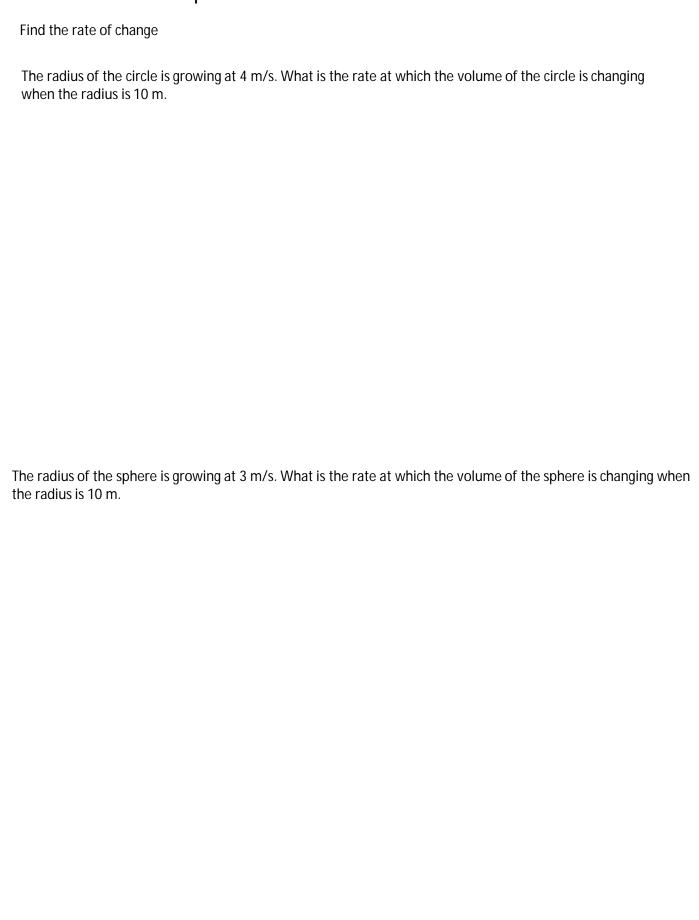
C12 - 3.1 - Critical Points HW

Find the critical points. Find the derivative and set it equal to zero. Draw a graph and show the location of the horizontal slopes. Use a number line to show where the derivative and slope is positive and negative. Define the critical point as a maximum or a minimum.

$$y = x^3 - 27x$$

$$y = x^3 - 5x^2 - 8x$$

C12 - 3.3 - Circle/Sphere Related Rates HMK



C12 - 3.3 - Square/Cube Related Rates HMK



C12 - 3.3 - Square/Cube Related Rates HMK

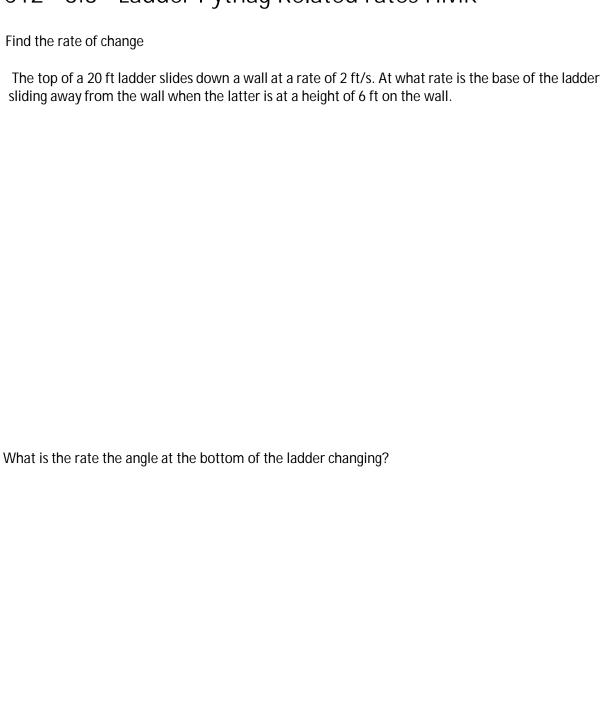


C12 - 3.3 - Train Pythag Related Rates HMK

Find the rate of change

Train 'a' leaves Vancouver heading North at 8 m/s and train 'b' leaves heading West at 6 m/s? How far are they a part after 5 minutes? What is the speed at which the trains are moving apart at that time?

C12 - 3.3 - Ladder Pythag Related rates HMK



C12 - 3.3 - Similar Triangles/Cos Law Related Rates Notes



C12 - 3.3 - Cone/Sim Tri/Cos Law Related Rates Notes

Find the rate of change.

A cone with a radius of 4 cm and height of 8 cm is filling with water with the height of the water level is increasing at a rate of 0.1 cm/s. What is the rate the volume is increasing when the height of the water is level 2 cm.