A right triangle has legs of 9 inches and 12 inches whose sides are changing.
The short leg is decreasing by 10 in/sec and the long leg is growing at 6 in/sec.
What is the rate of change of the area?

A right triangle has legs of 24 inches and 32 inches whose sides are changing.
The short leg is increasing by 6 in/sec and the long leg is shrinking at 7 in/sec.
What is the rate of change of the hypotenuse?

A rectangle has a length of 7 inches and a width of 1 inches whose sides are changing.
The length is increasing by 6 in/sec and the width is shrinking at 4 in/sec.
What is the rate of change of the perimeter?

A rectangle has a length of 6 inches and a width of 9 inches whose sides are changing.
The length is increasing by 5 in/sec and the width is shrinking at 4 in/sec.
What is the rate of change of the area?

The radius of a circle is increasing at a constant rate of 9 centimeters per second.
At the instant when the radius of the circle is 2 cm,
what is the rate of change of the area?
Round your answer to three decimal places.

The height of a cone is increasing at a constant rate of 7 inches per second,
and the volume is increasing at a rate of 592 cubic inches per second.
At the instant when the height of the cone is 7 inches and
the volume is 135 cubic inches,
what is the rate of change of the radius?
Round your answer to three decimal places.