

HOMEWORK QUESTIONS?

Simplify

$$(12x^2 - x + 4) - (8x^2 - x - 3)$$

Multiply

$$(3x - 13)(4x + 1)$$

A rocket is launched from a rooftop. Its height as a function of time is modeled by the equation

$$h(t) = -4t^2 + 60t + 25.$$

After how many seconds will the rocket land?

A rocket is launched from a rooftop. Its path is modeled by the equation

$$y = -4x^2 + 60x + 25.$$

What is the maximum height reached by the rocket?

A rocket is launched from a rooftop. Its path is modeled by the equation

$$y = -4x^2 + 60x + 25.$$

How long did it take for the rocket to reach its maximum height?

A rocket is launched from a rooftop. Its path is modeled by the equation

$$y = -4x^2 + 60x + 25.$$

After how many seconds will the rocket be at a height of 20 feet?

The profit  $P$ , for the sale of a car as a function of the cost of repair work done  $r$  (*in hundreds of dollars*) is modeled by the equation

$$P = 2r(225 - r)$$

What amount of repair work on the car will yield the maximum profit from its sale?



Justen threw a football to his friend, and the height of the football in meters above the ground after  $t$  seconds is modeled by  $f(t) = -4.9t^2 + 30t + 13$ . When did the football hit the ground?

Write the explicit equation for the function represented in the table below:

<b>x</b>	<b>y</b>
0	5
1	8
2	11
3	14

Write the explicit equation for the function represented in the table:

<b>x</b>	<b>y</b>
0	2
1	5
2	10
3	17

Write the explicit equation for the function represented in the table below:

<b>x</b>	<b>y</b>
1	-1
2	-4
3	-7
4	-10

Write the recursive equation for the function represented in the table:

<b>x</b>	<b>y</b>
1	5
2	8
3	11
4	14

Give the greatest common factor of

$$60x^3y^2 \text{ and } 24x^4y.$$

The Big Bagel Bakery sells more bagels when it drops prices, but then the profit changes too. The function  $y = -1000x^2 + 1100x - 2.5$  models the bakery's daily profit, where  $x$  is the bagel price in dollars. What price should they charge to maximize profits?

A skating rink manager finds the revenue  $y$  based on an hourly fee  $x$  for skating is represented by the function

$$y = -480x^2 + 3120x.$$

What hourly fee will produce maximum revenues?



