MasterMath

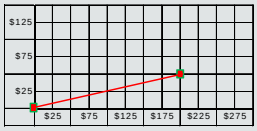
ALGEBRA

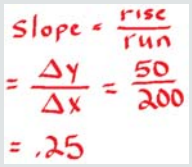
Writing Equations Using a Point and a Slope

The band earned $125 for playing at the dance. Their payment included a set fee, plus 25% of ticket sales. The dance sold $300 worth of tickets. Write an equation that describes how much the band would earn for any amount of ticket sales. Graph this equation.

Constant Rate of Change: 25% of Ticket Sales (x) = .25x

SLOPE = .25





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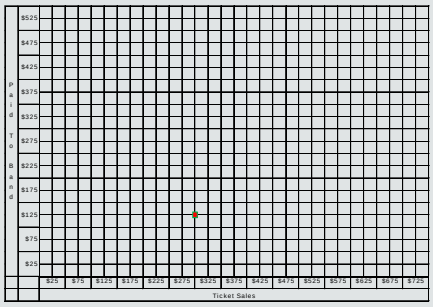
SLOPE = .25 = 1/4



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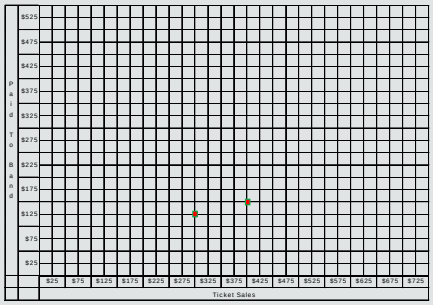

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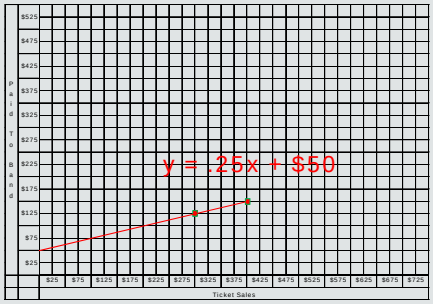
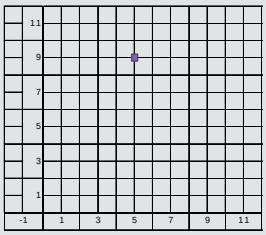


Writing Equations Using a Point and a Slope

You try it!

You know a point on a line, (5, 9). You know the slope of the line: m = 1. What is the equation for the line?



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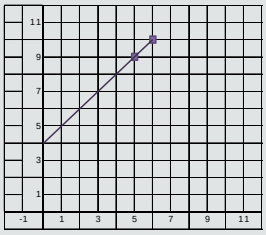

Slope = 1
y Intercept = 4
y = x + 4

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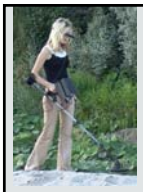

You try it!

You and your mother rent a metal detector to look for valuables at the beach. It cost $13.50 to rent the detector for 2 hours. It costs $19.50 to rent the detector for 4 hours. Write an equation that calculates how much the metal detector costs for any number of hours.

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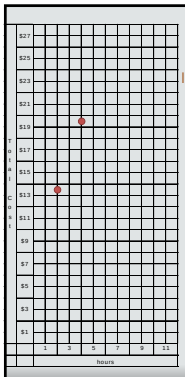

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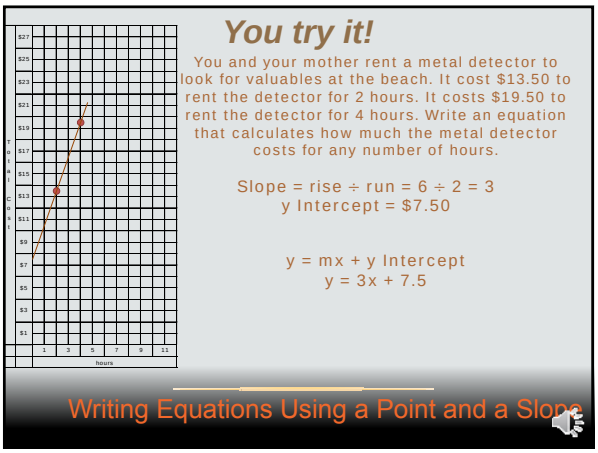
$27
$25
$23
$21
$19
$17
$15
$13
$11
$9
$7
$5
$3
$1
1
3
5
7
9
11
hours
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Slope = rise ÷ run = 6 ÷ 2 = 3
y Intercept = $7.50
y = mx + y Intercept
y = 3x + 7.5
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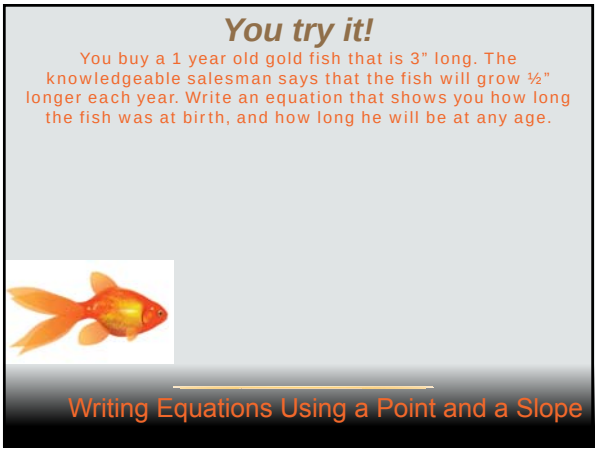
You try it!
You buy a 1 year old gold fish that is 3" long. The knowledgeable salesman says that the fish will grow ½" longer each year. Write an equation that shows you how long the fish was at birth, and how long he will be at any age.
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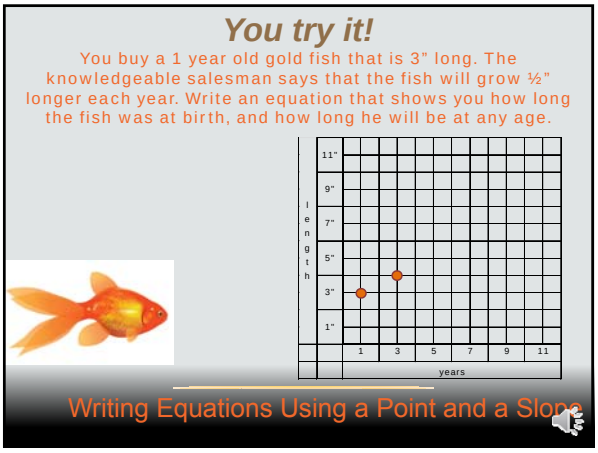
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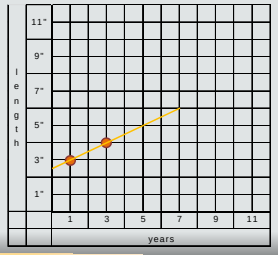
11"
9"
7"
5"
3"
1"
length
1
3
5
7
9
11
years
Writing Equations Using a Point and a Slope

You try it!

You buy a 1 year old gold fish that is 3" long. The knowledgeable salesman says that the fish will grow ½" longer each year. Write an equation that shows you how long the fish was at birth, and how long he will be at any age.

Slope = ½" / year = ½ = .5
y Intercept = 2.5"
y = .5x + 2.5



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