MasterMath

ALGEBRA

Writing Equations in Slope-Intercept Form

Motor Scooters For Rent

Only $24.95 per month plus $.15 per mile

Monthly Cost = $24.95 + $.15 • Miles Driven

y = $24.95 + $.15x

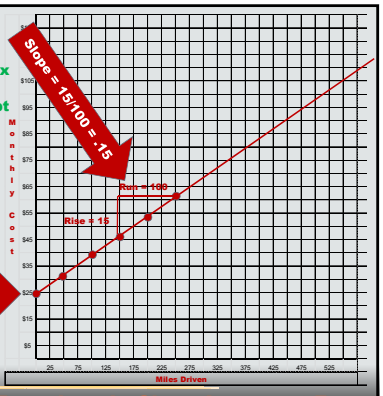
y = $24.95 + $.15x

y = y intercept + slope • x

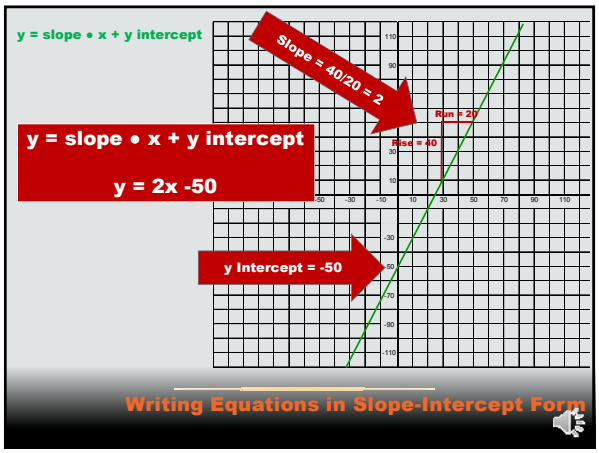
y = slope • x + y intercept

Miles Driven	Monthly Cost
0	24.95
50	$32.45
100	$39.95
150	$47.45
200	$54.95
250	$62.45

y Intercept = 24.95



Writing Equations in Slope-Intercept Form


y = slope • x + y intercept
Slope = 40/20 = 2
Run = 20
Rise = 40
y = slope • x + y intercept
y = 2x -50
y Intercept = -50
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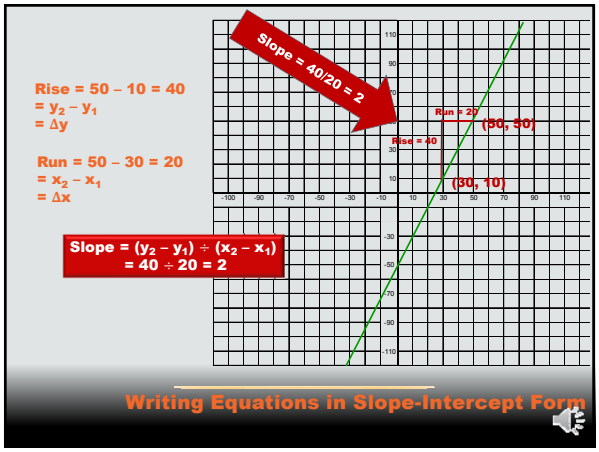
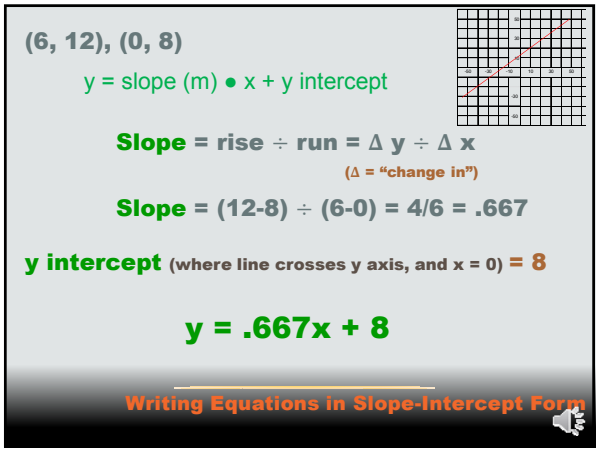

Rise = 50 – 10 = 40
= y2 – y1
= Δy
Run = 50 – 30 = 20
= x2 – x1
= Δx
Slope = (y2 – y1) ÷ (x2 – x1)
= 40 ÷ 20 = 2
Slope = 40/20 = 2
Run = 20
Rise = 40
(50, 50)
(30, 10)
Writing Equations in Slope-Intercept Form


(6, 12), (0, 8)
y = slope (m) • x + y intercept
Slope = rise ÷ run = Δ y ÷ Δ x
(Δ = "change in")
Slope = (12-8) ÷ (6-0) = 4/6 = .667
y intercept (where line crosses y axis, and x = 0) = 8
y = .667x + 8
Writing Equations in Slope-Intercept Form

You try it!

Find the equations that describes the straight line that goes through these two points: (12, 16) and (0, 12)

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Find the equations that describes the straight line that goes through these two points: (12, 16) and (0, 12)

y = mx + y intercept

slope = (16-12) ÷ (12-0) = 4 ÷ 12 = .333

y intercept = 12

y = .333x + 12

You try it!

Now, try it on your own. Go to www.MasterMath.info download *Writing Equations in Slope-Intercept Form* from the Worksheets Page, and test your skill. Then see how much you understand by taking the Subject Quiz.