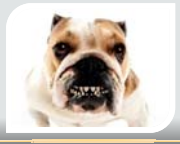
MasterMath

NUMBER SENSE

Direct Variation



Carla is walking at 3 MPH. How far has she gone after 1 hour?

Distance = 3MPH x 1 hour = 3 miles

Carla is walking at 3 MPH. How far has she gone (D) after 1 hour (T)?

D = 3T

y = kx

Gas costs $3.85 per gallon. Write a formula for how much you'll spend on gas for any volume of gas.

Gas costs $3.85 per gallon. Write a formula for how much you'll spend on gas (T) for any volume of gas (G).

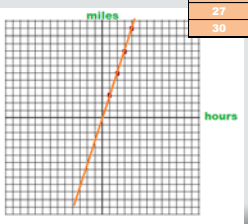
T = 3.85G

Direct Variation

D = 3T

y = kx
(k ≠ 0)

Distance	Time
3	1
6	2
9	3
12	4
15	5
18	6
21	7
24	8
27	9
30	10



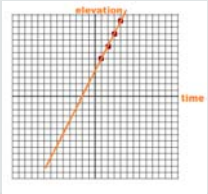
Direct Variation

The airplane takes off from Podunk, where the elevation is 4,000 ft. above sea level. The plane gains altitude at a rate of climb is 2,000 feet per minute. How far above sea level is the plane (E) after 1 minute (T)?

E = 2000T + 4000

y = 2000x + 4000
y = kx + 4000

Elevation	Time
6000	1
8000	2
10000	3
12000	4
14000	5
16000	6
18000	7
20000	8
22000	9
24000	10



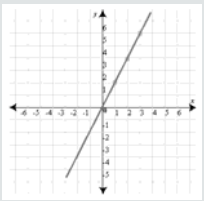
Direct Variation

You try it!

Do x and y show Direct Variation?
(1, 2), (2, 4), (4, 8)

y = kx

x	y	Formula
1	2	y = 2x
2	4	y = 2x
3	6	y = 2x



Direct Variation

You try it!

There are 4 cups per quart of liquid. Could this be expressed as a equation, and would it describe a direct variation?

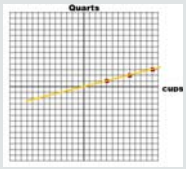
Direct Variation

You try it!

There are 4 cups (c) per quart (q) of liquid. Could this be expressed as a equation, and would it describe a direct variation?

$q = 4c$

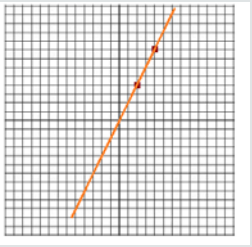
quarts	cups
1	4
2	8
3	12



Direct Variation

You try it!

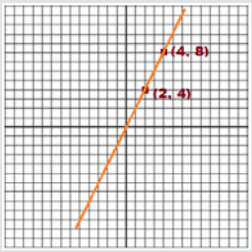
Does this graph show a direct variation?



Direct Variation

You try it!

Does this graph show a direct variation?

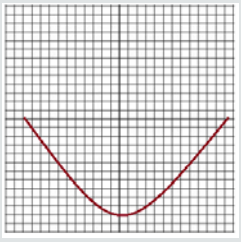


$y = 2x$

Direct Variation

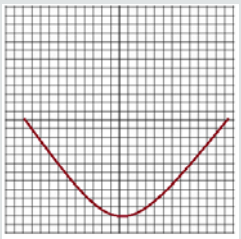
You try it!

Does this graph show a direct variation?



You try it!

Does this graph show a direct variation?



NO
1. It doesn't go through the Origin
2. It's not a straight line

You try it!

Now, try it on your own. Go to
www.MasterMath.info
download
Direct Variation
from the Worksheets Page, and test your skill.