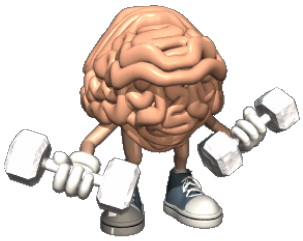
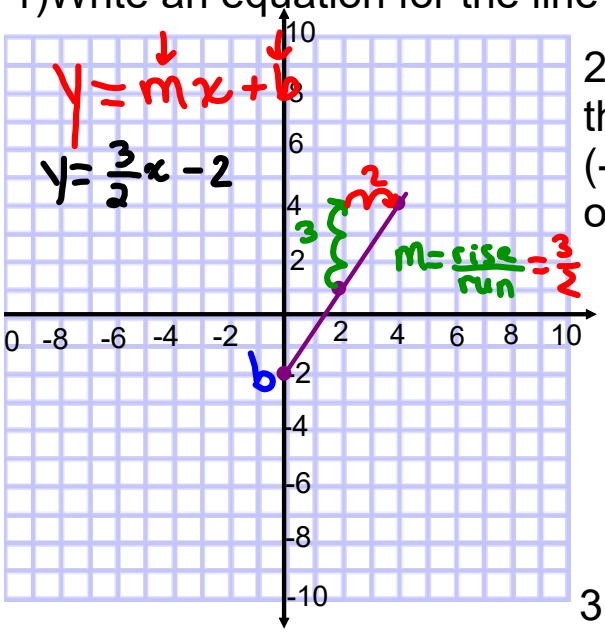
Warm Up



1)Write an equation for the line :



2)Write an equation of a line that passes through (-7, 4) and (-5, 10) and has a y intercept of -5.

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{10-4}{-5-(-7)}$

$= \frac{10-4}{-5+7}$

$= \frac{6}{2}$

$m = 3 \quad b = -5$

$y = 3x - 5$

3) Given the equations $y = \frac{2}{5}x + 6$, state the

i) Slope $2/5$

ii) y-intercept $(0, 6)$ (0 - +6)

iii) x- intercept

↓ let y = 0 and solve for 'x'

$y = \frac{2}{5}x + 6$

$0 = \frac{2}{5}x + 6$

$0 - 6 = \frac{2}{5}x + 6 - 6$

$-6 \times 5 = \frac{2}{5}x \times 5$

$-30 = 2x$

$\frac{-30}{2} = \frac{2x}{2}$

$-15 = x$

since Ratio

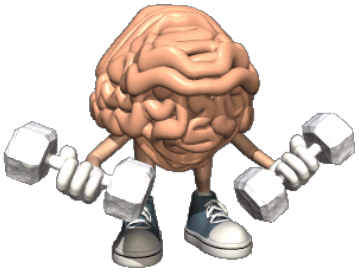
Cross multiply

$\frac{-6}{1} = \frac{2}{5}x$

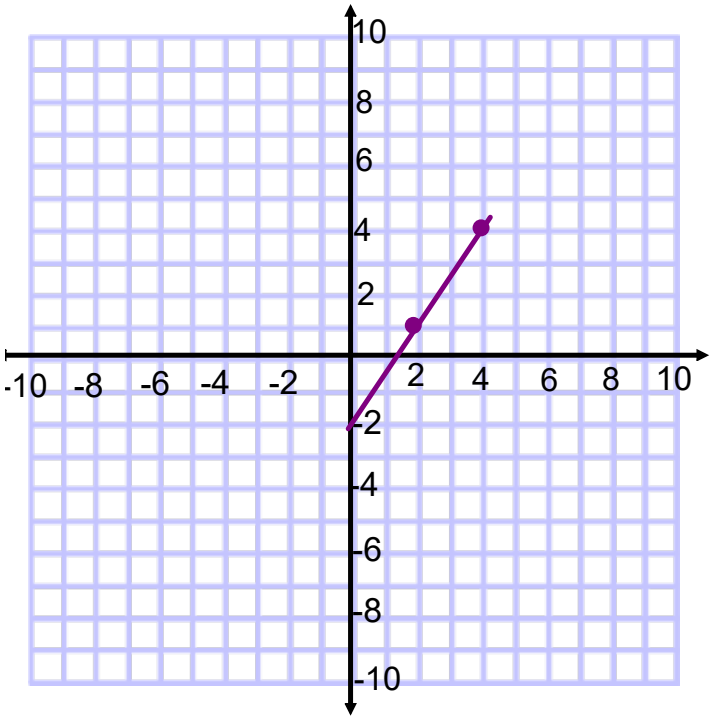
$1(2x) = (-6)(5)$

$2x = -30$

Warm Up

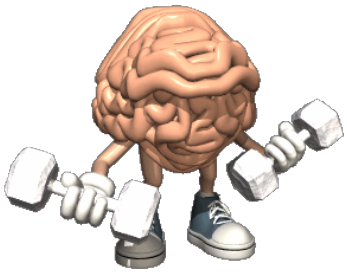


1)Write an equation for the line :



2)Write an equation of a line that passes through (-7, 4) and (-5, 10) and has a y intercept of -5.

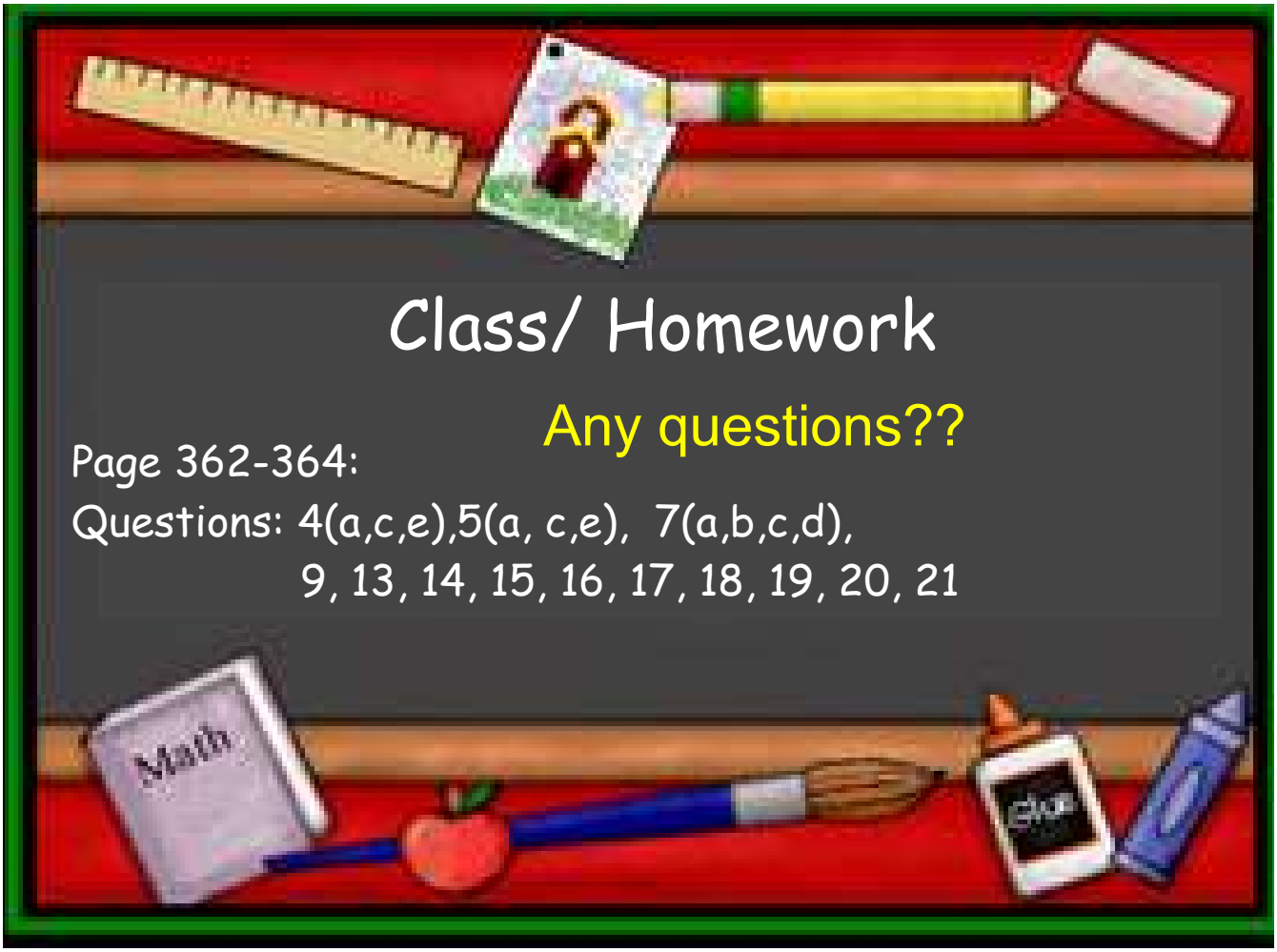
Warm Up



2)Write an equation of a line that passes through (-7, 4) and (-5, 10) and has a y intercept of -5.

3) Given the equations
$y = \frac{2}{5}x + 6$, state the i) Slope
ii) y-intercept
iii) x- intercept

(-15, 0)


Class/ Homework
Any questions??
Page 362-364:
Questions: 4(a,c,e),5(a, c,e), 7(a,b,c,d),
9, 13, 14, 15, 16, 17, 18, 19, 20, 21
Math
Glue

$y = mx + b$

Can you rearrange this to slope-intercept form?

a) $2y = -3x - 10$

$\frac{2y}{2} = \frac{-3x - 10}{2}$ Be careful both terms get divided by "2"

$y = -\frac{3}{2}x - 5$

slope, y-intercept

b) $3y + 4 = 2x + 5$

$3y + 4 - 4 = 2x + 5 - 4$

$3y = 2x + 1$

$\frac{3y}{3} = \frac{2x + 1}{3}$

$y = \frac{2}{3}x + \frac{1}{3}$

$$5y - 7 = 10x + 13$$

$$+7 \qquad +7$$

$$\frac{5y}{5} = \frac{10x + 20}{5}$$

$$y = \frac{10}{5}x + \frac{20}{5}$$

$$y = 2x + 4$$

$$y = mx + b$$

You need a

Slope (m)

y-intercept (b)

Point - Slope Form

You can also find the equation of a line if you are given a point and the slope of the line. In order to do this you use the formula:

Use this when give a Point and slop

You need a
-Point & a Slope

slope

$$y - y_1 = m(x - x_1)$$

The x and y values from the given point

This equation can be rearranged to $y=mx+b$ (slope intercept)

$$y - y_1 = m\,(x - x_1)$$

Slope point form is a rearrangement of

$$m = \frac{y - y_1}{x - x_1}$$

$$\frac{m}{1} = \frac{(y - y_1)}{(x - x_1)}$$

$$(x - x_1) \cdot \frac{m}{1} = \frac{(y - y_1)}{(x - x_1)} \cdot (x - x_1)$$

$$m\,(x - x_1) = y - y_1$$

point

$x_1\ y_1$

$m=3$

Write what you know:

Triangle

$m = 3$ $(-3, 4)$

e 1:
e equation of a line that passes through (-3,4) and has the same
y = x + 2.

$y - y_1 = m(x - x_1)$

$y - 4 = 3(x - -3)$

tidy signs

$y - 4 = 3(x + 3)$

Distribute through brackets

first get to
Point Slope Form

$y - 4^{+4} = 3x + 9^{+4}$

$y = 3x + 13$

then continue to
rearrange to get to
$y = mx + b$
Slope Intercept Form

$x_1\ y_1$

Find the equation of the line in if it has a slope of -3 and it goes through the point (1,7)

m

x_1, y_1

$y - y_1 = m(x - x_1)$

$y - 7 = -3(x - 1)$ point slope

Distribute # infront through

$y - 7 = -3x + 3$

$y - 7 + 7 = -3x + 3 + 7$

$y = -3x + 10$ Slope interceot

Leave in point slope form

$y - y_1 = m(x - x_1)$

$y + 3 = -2(x - 4)$

point (x, y)

$(4, -3)$

Homework

page 372-375

4(a,d), 5(a,c), 9(a,b)(i, ii),11(a,b),14, 20(a)

?work

Attachments

Point slope form.docx