REVIEW FOR UNIT 4

Short Answer

1. In the equation R = -6w -2, determine the value of R when $w = 13$.

1. $R = -6w - 2$
$= -6(13) - 2$
$= -78 - 2$
$= -80$

REVIEW FOR UNIT 4

Short Answer

1. In the equation R = -6w -2, determine the value of *R* when *w* = 13.

2. The pattern in this table continues. Write an equation that relates the number of squares to the figur number.

Figure Number, *f*	1	2	3	4	5
Number of Squares, *s*	46	42	38	34	30

2.

f	s
1	46
2	42
3	38
4	34
5	30

)-4
)-4
)-4
)-4

$S = -4f + 50$

$= -4(1)$

$= -4 \quad + 50$

REVIEW FOR UNIT 4

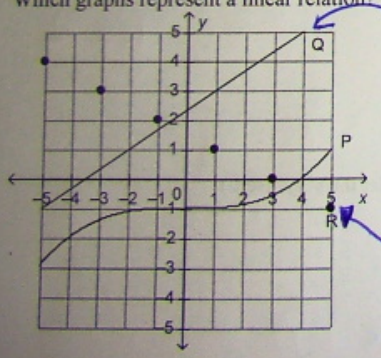
t Answer

1. In the equation R = -6w -2, determine the value of R when $w = 13$.

2. The pattern in this table continues. Write an equation that relates the number of squares to the figure number.

Figure Number, f	1	2	3	4	5
Number of Squares, s	46	42	38	34	30

3. Which graphs represent a linear relation?



Linear

Linear
The dots are in a straight line.

4.

x	y
0	-5
1	-2
2	1
3	4
4	7
5	10
6	13

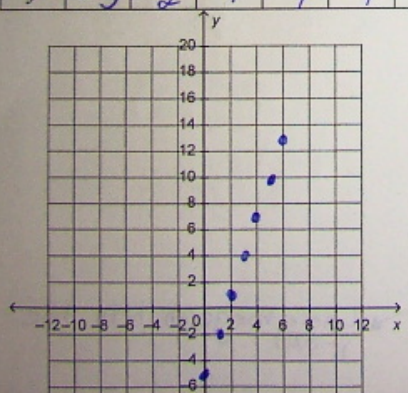
$y = 3x - 5$
$= 3(0) - 5$
$= 0 - 5$

$y = 3x - 5$
$= 3(2) - 5$
$= 6 - 5$
$= 1$

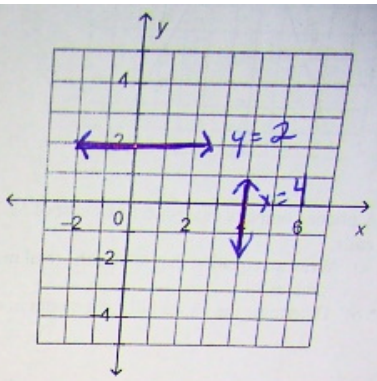
$y = 3x - 5$
$3(1) - 5$
$3 - 5$
-2

$y = 3x - 5$
$3(3) - 5$
$9 - 5$
4

x	0	1	2	3	4	5	6
y	-5	-2	1	4	7	10	13



5. Graph the following lines on the same grid. Label the lines.
   i) $y = 2$
   ii) $x = 4$



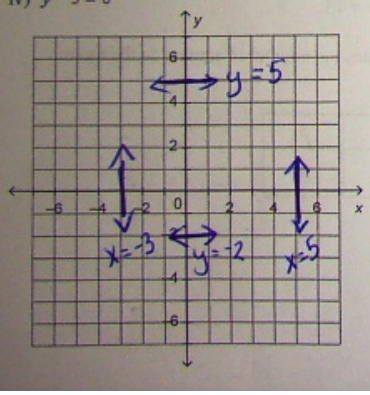
6. Graph these equations on the same grid. (HINT… Get the x or y by itself.)
   i) $x = -3$
   ii) $x - 5 = 0$
   iii) $y + 2 = 0$
   iv) $y - 5 = 0$

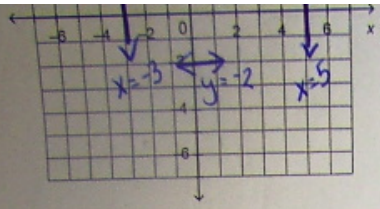
$x = -3$

$x - 5 = 0$ (+5)
$x = 5$

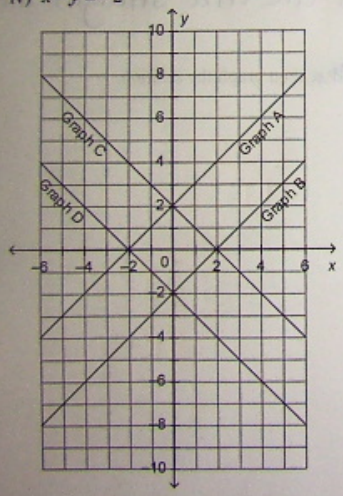
$y + 2 = 0$
$y = -2$

$y - 5 = 0$
$y = 5$





7. Match each equation with a graph on the grid below. (HINT… Get the y by itself.)
   i) $x+y=2$
   ii) $x-y=2$
   iii) $x+y=-2$
   iv) $x-y=-2$



omit this one if you want

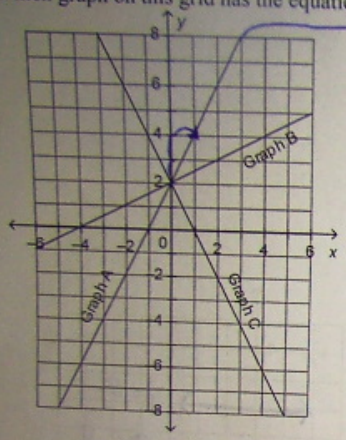
where the graph hits the

8. Which graph on this grid has the equation $y = 2x + 2$?

Where the graph hits the y-axis

Slope

$\frac{2}{1}$



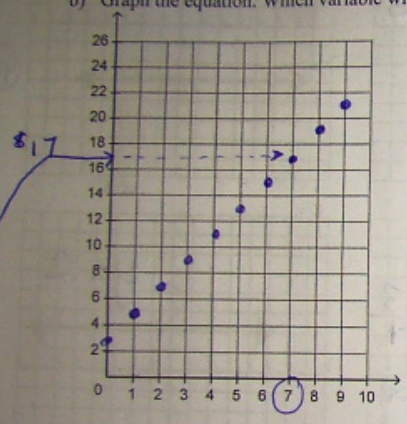
9. A phone company charges a fixed cost of \$2.35 as a flat rate, plus \$1.07 per minute for long distance calls.

a) Write an equation that relates the total monthly cost, C dollars, to the long distance calls, q minutes. $C = 1.07q + 2.35$

b) Determine the phone bill for a month in which 31 min of long distance calls were made.

$C = 1.07q + 2.35$
$= 1.07(31) + 2.35$
$= 33.17 + 2.35$
$= \$35.52$

10. Amir went to a pie-tasting festival. The festival charges an admission fee of $3.00, plus $2.00 for every slice of pie you eat.
   a) Write an equation that relates the total cost, C dollars, to the number of slices of pie you eat, r.
   b) Graph the equation. Which variable will you plot on the horizontal axis? Explain your reasoning.



$C = 2r + 3$
$= 2(1) + 3$
$= 2 + 3$
$= 5$

$C = 2r + 3$
$= 2(2) + 3$
$= 4 + 3$
$= 7$

$C = 2r + 3$
$= 2(3) + 3$
$= 6 + 3$
$= 9$

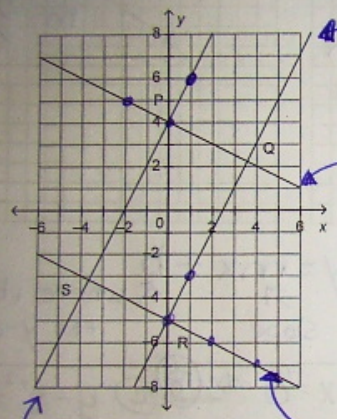
   c) Will you join the points on the graph? Explain. No, I can't purchase ½ of a piece.
   d) If Amir spent $17.00, how many slices of pie did he eat?

$C = 2r + 3$
$17 = 2r + 3$
$17 - 3 = 2r$
$14 = 2r$
$7 = r$

11. The lines on the grid below intersect to form rectangle PQRS.
The equations of the lines are:

$y = 2x + 4$; $y = 2x - 5$; $y = -\frac{1}{2}x + 4$; and $y = -\frac{1}{2}x - 5$

What is the equation of the line on which each side of the rectangle lies?
a) PQ b) QR c) RS d) PS

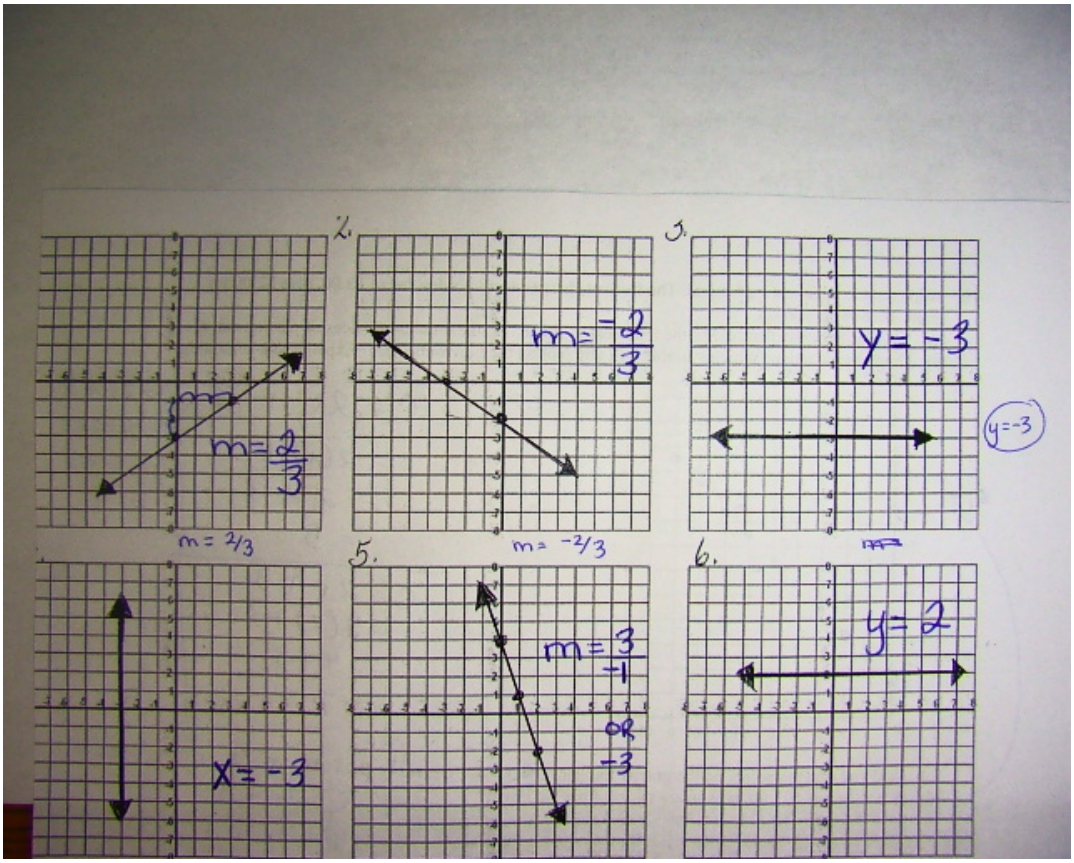


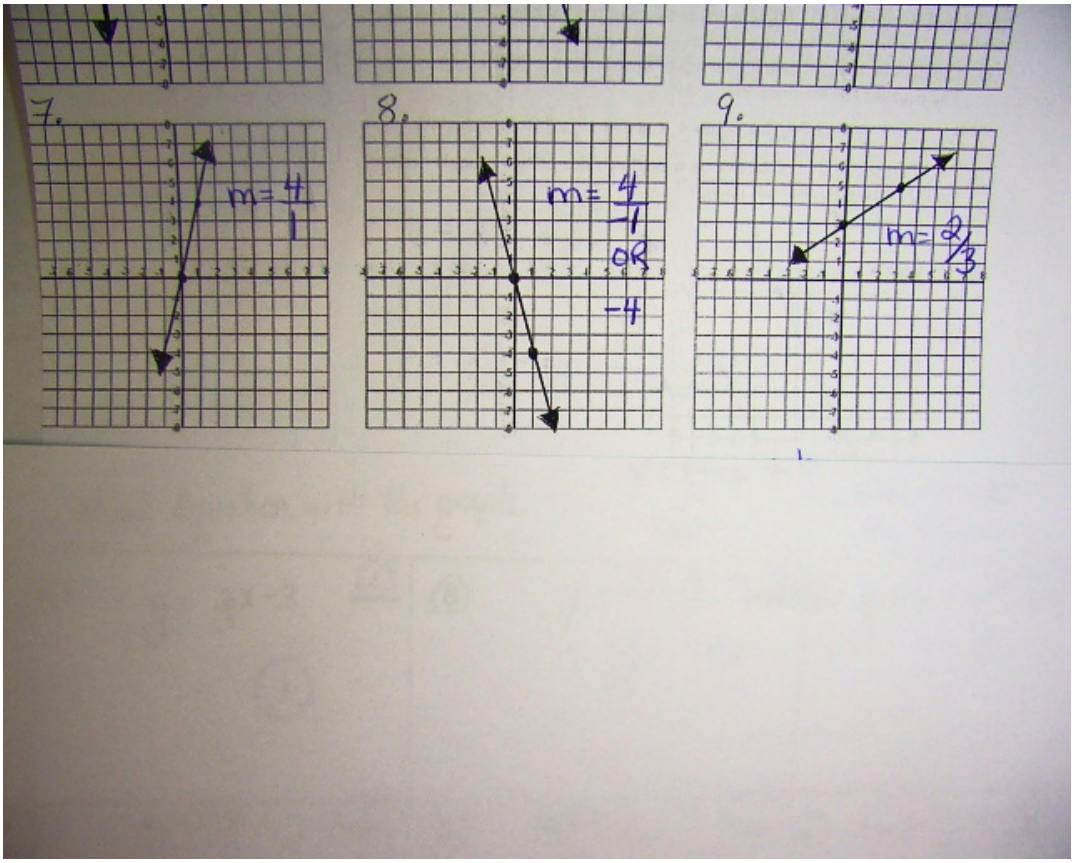
$y = \frac{2}{1}x - 5$

$y = -\frac{1}{2}x + 4$

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

$y = \frac{2}{1}x + 4$


2.
m = 2/3
m = 2/3
m = -2/3
3.
y = -3
y = -3
m = -2/3
5.
x = -3
m = 3/-1
OR
-3
6.
y = 2


7.
m= 4/1
8.
m= 4/-1
OR
-4
9.
m= 2/3

Match Equation with the graph

$y = mx + b$

m → Slope

b → where it hits the y-axis

A $y = \frac{2}{3}x - 3$ 1	B $y + 4x = 0$ (−4x, −4x) 8 $y = -4x$	C $y - 2 = 0$ (+2, +2) 6 $y = 2$
D $\frac{4y}{4} = \frac{16x}{4}$ 7 $y = 4x$	E $3x + y = 4$ (−3x, −3x) 5 $y = 4 - 3x$	F $x + 3 = 0$ (−3, −3) 4 $x = -3$
G $y = -3$ 3	H $y = -\frac{2}{3}x - 2$ 2	I $\frac{3y}{3} = \frac{2x}{3} + \frac{9}{3}$ 9 $y = \frac{2}{3}x + 3$