Answer Key – Math 1 Weekly Spiral Review Week - 1

Monday

Jim bought a $576 TV with the cash in his wallet. He now has $137 in his wallet. Write and solve an equation that shows how much he originally had in his wallet.

$x - 576 = 137 \quad x = 713$

Solve the equations:

4(x + 10) = 50 + 2x

x = 5

8(4n – 4) = -5n – 32

n = 0

Solve the equation for *r*:

$C = 2\pi r$

$r = \frac{C}{2\pi}$

For f(x) = -4x + 7, find each value.

a) f(2) f(2) = -1

b) f(-3) + 1 f(-3) + 1 = 20

Jani and her friends are going bowling. The equation c(g) = 5 + 3g represents the total cost of renting shoes and bowling *g* games.

How much does it cost to rent shoes? Explain how you know. It cost $5.00 to rent the shoes. I know this because 5 is the constant or flat rate in the equation c(g) = 5 + 3g

X	0	1	2	3	4
Y	27	21	15	9	3

Consider the following table of values.

a) Write a Now-Next rule to model the table.

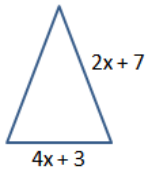
Next=Now – 6; starting at 27

b)Write an equation in slope intercept form to model the table.

y = -6x + 27

Tuesday

Write an inequality for x that would give this isosceles triangle a perimeter of at least 137 ft.



$8x + 17 \geq 137$

Solve each inequality and check to see that your answer is accurate.

4(-6x – 3) ≥ 12 x ≤ -1

5(n + 10) – 6n < n + 66

-8 < n

Solve the equation for *y*:

$ax + by = c$

$y = \frac{c-ax}{b}$

Pete coaches soccer clinics and charges $15.00 per player. *T* stands for the total amount of money he makes and *P* stands for the number of players that sign up.

Solve c(4) and explain what it means in the context of the problem.

c(4) = 17

This means she can rent shoes and bowl 4 games for $17.00

How much does Jani pay per game? Explain how you know.

Jani pays $3 per game because 3 is the slope or rate of change in the equation.

Write each expression in its simplest equivalent form by expanding and then combining like terms.

a) 7(x – 5) – 4x ; 3x - 35

b) 2(3x + 7) – (5x + 2) ; x + 12

On a model airplane, the scale is 5 cm = 2m. If the wingspan of the scale model is 28.5 cm, what is the actual wingspan of the plane? 11.4 m

Wednesday

Simplify using exponent rules:

$(2x^2)(4x^3y^2)$ $8x^5y^2$

$(-2x^2z)(-4y^2z)(-3xyz)$

$-24x^3y^3z^3$

Find the range values of the function for the given domain.

y = 5x – 7 ; {-3, -2, 4}

{-22, -17, 13}

Solve the equation for *m*:

$\frac{2m+4}{8} = w$

$m = 4w - 2$

Identify the independent and dependent variables.

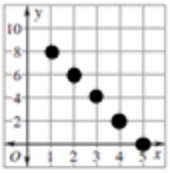
Independent: Number of players that sign up

Dependent: Amount of money he makes

Twelve decreased by twice a number equals -34. Write an equation for this situation and then find the number.

12 – 2n = -34; n=23

Graph $f(x) = 10 - 2x$ under the domain 1,2,3,4,5.



X	0	2	4	6	8
Y	12	18	24	30	36

Consider the table above. Does the table represent a linear function? YES

Write an equation in slope intercept. y = 3x + 12

Identify the slope. 3

Identify the y-intercept. 12

Thursday

Write an inequality to show how much more needs to be saved to reach $100

Week	Amount Saved ($)
0	0
1	20
2	40

$x \geq 60$

State the domain and range of the following data set:

{(-1, 2), (0,4), (0, -3), (1, -3)}

D: { -1, 0, 1}

R: {-3, 2, 4}

Solve the equation for *x*:

$m(x + y) = K$

$x = \frac{K}{m} - y$

Simplify:

$$\frac{5^3 \cdot 4^2 - 5^2 \cdot 4^3}{5 \cdot 4}$$

20

Are the line parallel, perpendicular or neither?

$y = \frac{1}{4}x + 6$

y = 4x – 5

Neither

Identify the domain and range of the following function:

{(6,2),(-2,-2),(5,2),(1,11)}

D: -2, 1, 5, 6

R: -2, 2, 11

Find the equation of a line that is parallel to:

$y = \frac{1}{2}x + 3$ and passes through point: (0, 2).

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

Find the equation of a line that is perpendicular to:

y = 3x – 1 and passes through point: (6, 0).

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