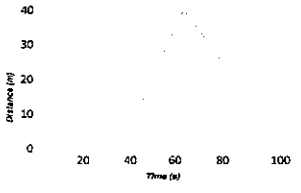
Week of: *3/27/17-3/31/17* **Name**_____

ALGEBRA SPIRAL REVIEW

MONDAY

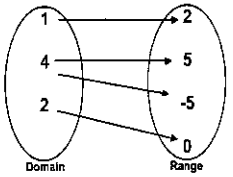
Label the graph



Sketch a graph for the situation.
Someone on their way to work stops at a light 3 times.

Simplify.
$(9x10^3)^2$ _____
$(x)^3x^5$ _____
$(x^{-2}x^{-3})^4$ _____
$(x^4)^{-3} \cdot 2x^4$ _____

Is the relation a function?



_____

Find the GCF of the terms and factor.
6x-4_____
v^2+4v_____
$18x^6 + 12x^3$ _____
$7x^2 - 21x$ _____
$15x^3 - 25x^2 + 55x$ _____

Write in scientific notation.
3.4_____
0.00007_____
7.68_____
48900 _____
0.15×10^{-2} _____

Write a linear function for the table.

Time Worked (h)	Amount Earned ($)
2	15
4	30
6	45
8	60

_____

Make a function table for the equation. f(n)=2x-5

Solve by using substitution.
−3x − 3y = 3
y = −5x − 17 (_____,_____)

Solve.
$(4v^2 - 3v^3 - 1) + (5v^2 - 2v^3 - 2)$
_____
$(3 - 6m^2 + 6m^3) + (8 - 4m^4 + 7m^2)$
_____
$(a^3 + 4a - 8) - (8a^3 - 4 - 8a)$
_____
$(4 - 2n^3 + 4n^2) - (3n^4 - 4 + n^3)$
_____
$2x^2(x - 3y)$ _____
$(2x + 1)(8x - 3)$ _____
$(7a + 7b)(7a^2 - 8ab + 6b^2)$
_____
$(3x + 2y)(x^2 + 6xy - y^2)$
_____
$(8n - 5)^2$ _____
$(5 + 6x)^2$ _____

TUESDAY

Find the x and y intercepts of the lines.
-3x+5y=30_____
3x+4y=9_____

Find the slope.
(6,8) (4,3) _____
(3,7) (2,0) _____
(5,6) (7,6) _____

Solve.
6,12,18,__,30
What's the pattern?____
What would the 7th term be?_____
4,8,12,16_____
Find the 7th term_____

Solve.
The school that Lisa goes to is selling tickets to the annual talent show. On the first day of ticket sales the school sold 4 senior citizen tickets and 5 student tickets for a total of $102. The school took in $126 on the second day by selling 7 senior citizen tickets and 5 student tickets. What is the price each of one senior citizen ticket and one student ticket?

_____
Senior citizen____
Student_____

Write the equation in point slope form.
(9, -6) m=12 _____
(4, 2) m=2 _____

Write an equation of a line that is parallel.
y=3x-2; (4,8)_____
y=-4x+5; (5,8)_____

Write an equation of a line that is perpendicular.
y=1/2x+23; (6,7)_____
y=-5/2+6; (5,-7)_____

Through: (2,3) **parallel to:**y=5x-12
_____

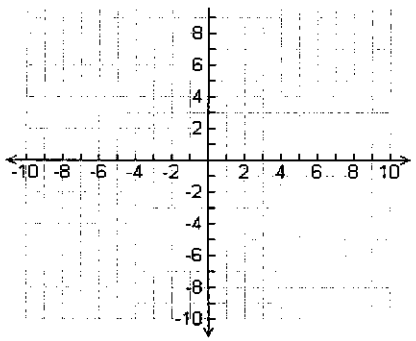
Find the cube or square roots.

1. $\sqrt{49}$
2. $\sqrt[3]{27}$
3. $\sqrt{81}$
4. $\sqrt[3]{8}$
5. $\sqrt{25}$
6. $\sqrt{121}$
7. $\sqrt[3]{64}$
8. $\sqrt{16}$
9. $\sqrt{169}$
10. $\sqrt[3]{125}$
11. $\sqrt{36}$
12. $\sqrt{64}$
13. $\sqrt{100}$
14. $\sqrt{144}$
15. $\sqrt[3]{216}$
16. $\sqrt[3]{343}$
17. $\sqrt[3]{1000}$
18. $\sqrt[3]{512}$

WEDNESDAY

Solve by graphing.

y=x-2 y=-3x+5 (_____,_____)



Solve by using elimination.

2x+7y=-10

4x-12y=14 (_____,_____)

Solve.

Castel and Gabriella are selling pies for a school fundraiser. Customers can buy apple pies and lemon meringue pies. Castel sold 6 apple pies and 4 lemon meringue pies for a total of $80. Gabriella sold 6 apple pies and 5 lemon meringue pies for a total of $94. What is the cost each of one apple pie and one lemon meringue pie?

_____

Apple____ lemon_____

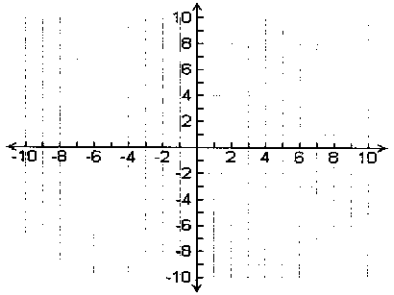
Solve.

$\frac{(2x^3z^2)^3}{x^3y^4z^2 \cdot x^{-4}z^3}$ _____

$\frac{(2hj^2k^{-2} \cdot h^4j^{-1}k^4)^0}{2h^{-3}j^{-4}k^{-2}}$ _____

Graph the system of inequalities.

y<4x+3 y>5x+-2



Factor the expression.

x^2+3x-4_____

$d^2+6d-40$_____

$h^2+16h-17$_____

$c^2+11c+18$_____

y^2-81_____

k^2-196_____

y^2-900_____

Simplify the radicals.

$\sqrt{75}$ $\sqrt{16}$

$\sqrt{36}$ $\sqrt{64}$

$\sqrt{80}$ $\sqrt{30}$

$\sqrt{8}$ $\sqrt{18}$

$\sqrt{32}$ $\sqrt{12}$

$\sqrt{8}$ $\sqrt{108}$

THURSDAY

Write an equation in slope-intercept form.

(7, 8), (3, 6)

Write in standard form.

9.4502×10^{-6}_____

7.75×10^{-1}_____

1.71×10^{7}_____

0.9×10^{-3}_____

$(5 \times 10^{-5})(3.5 \times 10^{-5})$_____

$\frac{7 \times 10^{4}}{9 \times 10^{-4}}$_____

Solve.

(q-7) (q+3)_____

(y-2) (5y-8)_____

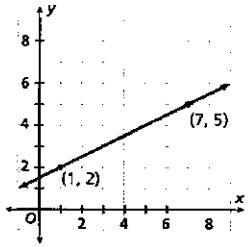
(y+3) (9y+2)_____

Solve

$(14p^4+11p^2-9p^5)-(14+5p^5-11p^2)$

_____

Write a linear function of the line.



_____

Solve

Pedro is trying to incorporate more exercise into his busy schedule. He has several short exercise routines he can complete at home. Last week, he worked out for a total of 108 minutes by doing 3 arm routines and 3 abdominal routines. This week, he has completed 3 arm routines and 2 abdominal routines and spent a total of 92 minutes exercising. How long does each routine last?

_____

Arm_____ Abdominal____

Write an equation of a line in slope-intercept form.

(-1, 7), (4, -3)

Simplify the radicals.

$\frac{4}{\sqrt{10}}$ _____ $\frac{6}{\sqrt{2}}$ _____

$\frac{3}{\sqrt{5}}$ _____ $\frac{9}{\sqrt{48}}$ _____

$\frac{4}{\sqrt{8}}$ _____ $\frac{5}{\sqrt{125}}$ _____

$\frac{-4}{3\sqrt{2}}$ _____ $\frac{5}{\sqrt{3}}$ _____

$\frac{\sqrt{3}}{\sqrt{8}}$ _____ $\frac{\sqrt{2}}{\sqrt{8}}$ _____

$\frac{\sqrt{5}+3}{\sqrt{10}}$ _____