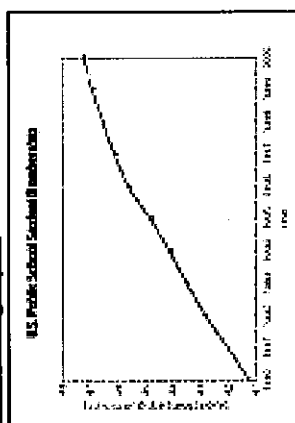
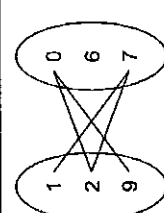
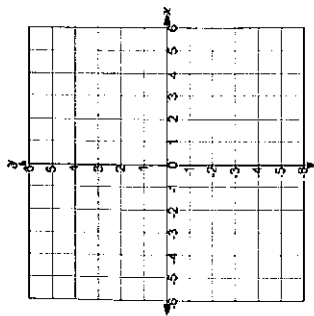


ALGEBRA SPIRAL REVIEW

<p>Label the graph.</p>  <p>Sketch a graph for this situation: the amount of hot water in the tank as you shower.</p> <p>Simplify.</p> <p>$(9x^{10}y^3)^2$ _____</p> <p>$(x^5)^2$ _____</p>	<p>Is the relation a function?</p>  <p>Use the vertical line test to determine if the relation is a function.</p> <p>$(-3, 1)$ $(4, 5)$ $(-2, -3)$ $(3, -6)$ _____</p> <p>Write in scientific notation.</p> <p>0.00005 _____ 6.78 _____</p> <p>3.2 _____ 999999.9 _____</p> <p>Find the next three terms in each sequence.</p> <p>25, 50, 75, ... _____</p> <p>10, 20, 40, ... _____</p> <p>89, 78, 67, ... _____</p>	<p>Write a rule and complete the table.</p> <table border="1" data-bbox="259 525 633 987"> <tr> <td>14</td> <td>28</td> </tr> <tr> <td>15</td> <td></td> </tr> <tr> <td>17</td> <td>32</td> </tr> <tr> <td></td> <td>34</td> </tr> </table> <p>Rule: _____</p> <p>Make a function table for the equation. $f(n) = 3x - 9$</p>	14	28	15		17	32		34	<p>Solve.</p> <p>$(6k - 7k^2) + (4k^2 + 6)$ _____</p> <p>$(5p^2 - 8) - (3p + 4 - 5p^2)$ _____</p> <p>$(6n - 4n^4 + 5n^3) + (n^3 - 6n^4 + 7n)$ _____</p> <p>$(5p + 3)(8p + 7)$ _____</p> <p>$(3x + 5)(7x - 4)$ _____</p> <p>$(5m + 4)(4m^2 + 2n - 4)$ _____</p> <p>$(3x + 4)(5x^2 - 6x - 6)$ _____</p> <p>$(8n^2 + n - 4)(6n^2 - 6n - 4)$ _____</p>
14	28										
15											
17	32										
	34										
<p>Find the x and y-intercepts of the lines.</p> <p>$9y = -7x - 12$ _____</p> <p>$7y = 8x - 5$ _____</p> <p>Solve.</p> <p>The difference of two numbers is 3. Their sum is 13. Find the numbers.</p> <p>Numbers: _____</p> <p>Find the value of two numbers if their sum is 12 and their difference is 4.</p> <p>Numbers: _____</p>	<p>Solve.</p> <p>Leonard is having a garage sale to get rid of some books. He makes \$12 on the first day by selling 4 paperbacks and 2 hardcovers. The next day, he makes \$19.50 by selling 7 paperbacks and 3 hardcovers. How much is one paperback and one hardcover?</p> <p>Paperback _____ Hardcover _____</p> <p>Solve.</p> <p>9, 27, 45, 63, _____, 99, ...</p> <p>What is the pattern? _____</p> <p>What would the 10th term be? _____</p>	<p>Solve.</p> <p>$-29, -34, -39, -44, -49, \dots$</p> <p>What is the pattern? _____</p> <p>What would be the 7th number? _____</p> <p>60, 80, 100, _____, 140, ...</p> <p>What is the pattern? _____</p> <p>Write the equation of the line in point-slope form.</p> <p>$m = -9$ $(0, -4)$ _____</p> <p>$m = \frac{1}{3}$ $(6, 2)$ _____</p> <p>Solve.</p> <p>$(13y + 7^3) + (4^3 - y)$ _____</p> <p>$(-9abc + 8ab^2) + (-3 - 6ab^2 + 3abc)$ _____</p>	<p>Complete.</p> <p>$t^2 + 7t + 10 = (t + 2)(t + \dots)$</p> <p>$y^2 - 13y + 36 = (y - 4)(y - \dots)$</p> <p>$x^2 - 8x + 7 = (x - 1)(x - \dots)$</p> <p>$x^2 + 9x + 18 = (x + 3)(x + \dots)$</p> <p>Factor the expression.</p> <p>$t^2 + 4t + 3$ _____</p> <p>$y^2 + 6y + 8$ _____</p> <p>$k^2 - 16k + 28$ _____</p> <p>$d^2 + 21d + 38$ _____</p> <p>$rt^2 - 3n + 2$ _____</p> <p>$w^2 + 6w + 5$ _____</p>								

Solve by graphing.
 $y = -6x + 2$ $y = x + 5$



Use a graphing calculator to solve.

7	14	21	28	35
49	196	441	784	1225

Simplify, put in scientific notation.

- 8×10^4 _____
- 4×10^2 _____
- 9×10^5 _____
- 5×10^7 _____
- $(-3 \times 10^4)(6 \times 10^8)$ _____
- $(1.08 \times 10^{-3})(9.3 \times 10^{-3})$ _____

Simplify the expression.

- $(a^2 - 6b) - (-4b + 8a^2)$ _____
- $(8xy - 11 + 3) + (-7 + xy)$ _____
- $(-y^5 + 3z^3) + (8z - 2y)$ _____

Solve by substitution.

- $y = -4x + 9$ _____
- $5x - 5y = 2$ _____
- $8x + 2y = 16$ _____
- $y = -7x + 11$ _____

Solve by elimination.

- $4x - 4y = 19$ _____
- $3x + 2y = 5$ _____
- $x + 6y = 13$ _____
- $-3x - y = 8$ _____

Solve.

Suppose you have \$80 in your bank account. You start saving \$10 each week. Your cousin has \$150 in his bank account, and is saving \$5 a week. Will you and your cousin ever have the same amount? If so, how much?

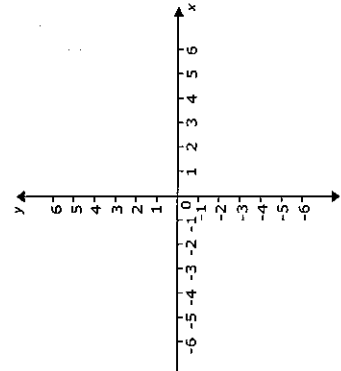
Week: _____
 Amount: _____

Solve.

- $(3n+2)(n+3)$ _____
- $(k-2)(k-3)$ _____
- $(7k-3)(k^2-2k+7)$ _____
- $(6n^2-6n-5)(7n^2+6n-5)$ _____

Graph the system of inequalities.

$y \geq 5 - 6$ $y > -4x + 3$



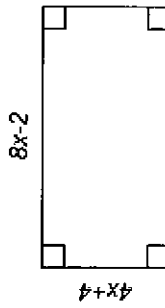
Write each number in scientific notation.

- 0.00005 $\times 10^3$ _____
- 21×10^{-9} _____
- 62338.12×10^{-2} _____

Write a rule for each sequence, and determine if it is geometric or arithmetic.

- 2, 10, 50, ... _____
- 1, 4, 9, 16, 25, ... _____
- 80, 91, 102, ... _____

Find the perimeter and area.



P= _____ A= _____

Complete.

- $m^2 + 3m - 10 = (m - 2)(m + 5)$
- $v^2 - 2v - 24 = (v + 4)(v - 6)$
- $k^2 - 8k - 9 = (k + 1)(k - 9)$
- $q^2 + 3q - 18 = (q - 3)(q + 6)$

Factor the expression.

- $x^2 + 3x - 4$ _____
- $q^2 - 2q - 8$ _____
- $y^2 + y - 20$ _____
- $k^2 + 16k - 17$ _____
- $x^2 - 14x - 32$ _____
- $d^2 + 6d - 40$ _____
- $x^2 + 3x - 4$ _____
- $k^2 + 16k - 17$ _____
- $t^2 + 7t - 18v^2$ _____
- $m^2 - 3mn - 54n^2$ _____
- $k^2 \div 18kj + 17j^2$ _____
- $x^{12} + 12x^6 + 35$ _____
- $m^{10} + 18m^5 + 17$ _____