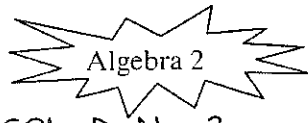


SOL Do Now 1

DO NOW PACKET 2

Name: _____

<p>1. $3(x-3) = 3x - 9$ What property justifies this statement?</p> <p>A. Associative Prop. of Mult. B. Commutative Prop. of Mult. C. Identity Prop. for Mult. D. Distributive Prop.</p>	<p>2. What is the solution to $5 - \frac{n}{2} = 12$?</p> <p>A. -34 B. -14 C. 14 D. 34</p>	<p>3. What is the solution to the inequality below? $-2x + 3 > 7$</p> <p>A. $x < -5$ B. $x < -2$ C. $x > 2$ D. $x < 3$</p>
<p>4. Simplify: $\frac{\sqrt[3]{27}}{\sqrt[3]{9}}$</p> <p>A. 3 B. 9 C. $\sqrt[3]{3}$ D. $\sqrt[3]{9}$</p>	<p>5. Simplify: $(2 + 5i)^2$</p> <p>A. -21 B. -29 C. $-21 + 20i$ D. $-29 + 20i$</p>	<p>6. Which is one of the correct factors of $x^2 - 3x - 18$?</p> <p>A. $(x-2)$ B. $(x+6)$ C. $(x-9)$ D. $(x+3)$</p>



SOL Do Now 2

Name: _____

<p>1. $3 \cdot (c \cdot d) = 3 \cdot (d \cdot c)$ What property justifies this statement?</p> <p>A. Associative Prop. of Mult. B. Commutative Prop. of Mult. C. Identity Prop. for Mult. D. Distributive Prop.</p>	<p>2. Which is equivalent to $(2x^2)^3$?</p> <p>A. $8x^6$ B. $6x^6$ C. $8x^5$ D. $6x^5$</p>	<p>3. What is the solution to the inequality below? $-3x > 12$</p> <p>A. $x < -4$ B. $x < 4$ C. $x > -4$ D. $x < 4$</p>
<p>4. What is the range of the function $f(x) = (x-1)^2$ when the domain is $\{-5, 0, 5\}$?</p> <p>A. $\{1, 16, 36\}$ B. $\{1, 3, 4\}$ C. $\{1, 36\}$ D. $\{-12, -2, 8\}$</p>	<p>5. If $f(x) = -2x^2 + x - 5$, what is $f(3)$?</p> <p>A. -20 B. -14 C. 16 D. 34</p>	<p>6. When factored completely, $x^2 - 16$ equals ?</p> <p>A. $(x-8)(x+8)$ B. $(x+4)(x-4)$ C. $(x-4)^2$ D. $(x-8)^2$</p>

Algebra 2
SOL Do Now 3

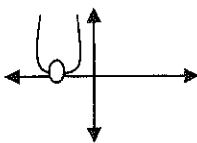
Name: _____

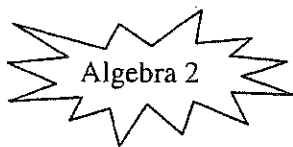
<p>1. $\frac{1}{2} \cdot 1 = \frac{1}{2}$</p> <p>What property justifies this statement?</p> <p>A. Associative Prop. of Mult. B. Commutative Prop. of Mult. C. Identity Prop. for Mult. D. Distributive Prop.</p>	<p>2. Which is equivalent to $\frac{2b^4}{b^2}$?</p> <p>A. $2b$ B. $2b^6$ C. b^2 D. $2b^2$</p>	<p>3. What is the solution to the inequality below?</p> <p style="text-align: center;">$-12 - 2y > 12$</p> <p>A. $y < 12$ B. $y < -12$ C. $y > 0$ D. $y < 0$</p>
<p>4. What is the range of the function $f(x) = 3x - 9$ when the domain is $\{-1, 1, 3\}$?</p> <p>A. $\{-1, 1, 3\}$ B. $\{-3, -6, 0\}$ C. $\{-12, -6, -3\}$ D. $\{-12, -6, 0\}$</p>	<p>5. $-2 \begin{bmatrix} -2 & 4 \\ -3 & -6 \end{bmatrix}$ is equal to</p> <p>A. $\begin{bmatrix} -4 & 2 \\ -5 & 12 \end{bmatrix}$ B. $\begin{bmatrix} 4 & -8 \\ 6 & 12 \end{bmatrix}$ C. $\begin{bmatrix} -4 & 2 \\ -6 & 8 \end{bmatrix}$ D. $\begin{bmatrix} 0 & 2 \\ 1 & 4 \end{bmatrix}$</p>	<p>6. What is the correct factored form for $x^2 - 15x + 56$?</p> <p>A. $(x-7)(x-8)$ B. $(x-7)(x+8)$ C. $(x+7)(x-8)$ D. $(x-28)(x-2)$</p>

Algebra 2

SOL Do Now 4

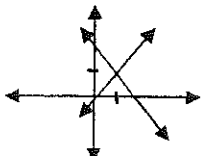
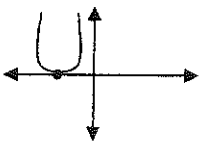
Name: _____

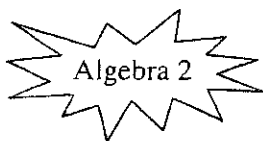
<p>1. Which statement exemplifies the Commutative Prop. for Addition?</p> <p>A. $2 + 4 = 2 \neq 4$ B. $2 \cdot 4 = 4 \cdot 2$ C. $2 + 4 = 4 + 2$ D. $4 = 4$</p>	<p>2. The formula for the Volume of a rectangular solid is $v = l \cdot w \cdot h$. If the volume is 960 cubic inches and the base has $l = 12$ in. and $w = 10$ in, what is the height (h) ?</p> <p>A. 4 in. B. 8 in. C. 120 in. D. 480 in.</p>	<p>3. The area of a circle = πr^2. If $r = 3$, what is the area of the circle?</p> <p>A. $A = 3\pi$ B. $A = 9\pi$ C. $A = 3\pi^2$ D. $A = 9\pi^2$</p>
<p>4. A consulting engineer bills his customers \$90 for each hour he works. If a client's bill is \$955, which equation could be used to find the number of hours worked?</p> <p>A. $\frac{90}{x} = 955$ B. $\frac{x}{955} = 90$ C. $90x = 955$ D. $955x = 90$</p>	<p>5. </p> <p>What is the range of the function?</p> <p>A. {all real numbers} B. {all real numbers > 0} C. {all real numbers < 0} D. {all real numbers between 0 and 3}</p>	<p>6. $\begin{bmatrix} 2 & -4 \\ 3 & 2 \end{bmatrix} + \begin{bmatrix} 6 & 1 \\ 4 & 2 \end{bmatrix}$ is equal to</p> <p>A. $\begin{bmatrix} 8 & -3 \\ 7 & 4 \end{bmatrix}$ B. $\begin{bmatrix} 8 & 4 \\ 0 & 4 \end{bmatrix}$ C. $\begin{bmatrix} 12 & -4 \\ 12 & 8 \end{bmatrix}$ D. $\begin{bmatrix} -4 & -6 \\ 26 & 7 \end{bmatrix}$</p>



SOL Do Now 5

Name: _____

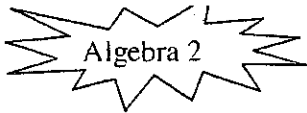
<p>1. Which statement exemplifies the Transitive Prop. of Inequalities?</p> <p>A. If $x < y$ and $y < z$, then $x > z$. B. If $x < y$ and $y < z$, then $x < z$. C. If $x < y$ and $y < z$, then $x = z$. D. If $x < y$ and $y = z$, then $x < z$.</p>	<p>2. What is the solution to the system of equations shown in the graph below?</p> <p>A. (2,1) B. (1,1) C. (1,3) D. (1,2)</p> 	<p>3. What are the zeros of the function $f(x) = x^2 - 5x - 6$?</p> <p>A. $x = -6, x = 1$ B. $x = 6, x = 1$ C. $x = 2, x = -3$ D. $x = 2, x = 3$</p>
<p>4. A rectangular swimming pool measuring 15 feet long and 10 feet wide, has its length and width increased by the same amount. The new area can be represented by the product: $(x+15)(x+10)$. What is this product?</p> <p>A. $x^2 + 5x + 25$ B. $10x^2 - 15x = 150$ C. $2x + 25$ D. $x^2 + 25x + 150$</p>	<p>5.</p>  <p>What is the range of the function?</p> <p>A. {all real numbers} B. {all real numbers ≥ 0} C. {all real numbers ≤ 0} D. {all real nos. between -3 and -1}</p>	<p>6. Factor completely: $10x^2 + 5x - 30$.</p> <p>A. $2(2x+2)(x-2)$ B. $5(x-2)(2x+3)$ C. $5(x+2)(2x-3)$ D. $5(2x-2)(x+3)$</p>



SOL Do Now 6

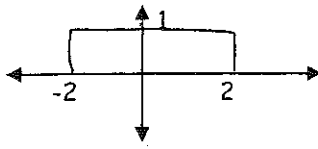
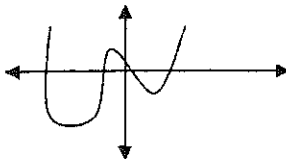
Name: _____

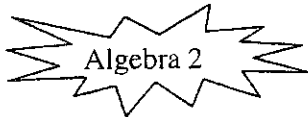
<p>1. What is the simplified form of $2\sqrt{12} + 3\sqrt{3}$?</p> <p>A. 16.5 B. $5\sqrt{15}$ C. $7\sqrt{3}$ D. $7\sqrt{6}$</p>	<p>2. $a \cdot \frac{1}{a} = 1$ illustrates which property of real numbers ?</p> <p>A. multiplicative identity B. multiplicative prop. of zero C. commutative prop. of mult. D. multiplicative inverse</p>	<p>3. What is the solution to the following pair of equations?</p> $\begin{cases} 3x + 2y = 2 \\ 3x + y = 7 \end{cases}$ <p>A. (4,-5) B. (4,5) C. (-5,-4) D. (-5,4)</p>
<p>4. Simplify: $(2x^2y^4)^4$</p> <p>A. $8x^8y^{16}$ B. $16x^8y^{16}$ C. $16x^6y^8$ D. $8x^6y^8$</p>	<p>5. What is the value of the function $f(-4)$ if $f(x) = 4x - 1$?</p> <p>A. -17 B. 15 C. -5 D. 3</p>	<p>6. What is equivalent to $(4 - 2i)(5 + 3i)$?</p> <p>A. 26 B. 12 C. $14 + 2i$ D. $26 + 2i$</p>



SOL Do Now 7

Name: _____

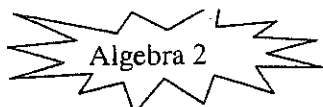
<p>1. What is the speed of sound at $t=0^\circ C$, where v is the speed of sound in ft/sec at the air temperature, t, in Celsius using the formula below -</p> $v = \frac{\sqrt{273+t}}{16.5}$ <p>A. 0 ft/sec B. 1 ft/sec C. 1087 ft/sec D. 2174 ft/sec</p>	<p>2. What is the range of this graph?</p>  <p>A. $\{x -2 \leq x \leq 2\}$ B. $\{y \text{all real numbers}\}$ C. $\{y y \geq 0\}$ D. $\{y 0 \leq y \leq 1\}$</p>	<p>3. The brightness of a light bulb varies inversely as the square of the distance from the source. If a light bulb has a brightness of 300 lumens at 2 feet, what will its brightness be at 10 feet?</p> <p>A. 6 lumens B. 12 lumens C. 60 lumens D. 120 lumens</p>
<p>4. What is a correct factorization for $x^3 - 8$?</p> <p>A. $(x - 2)^3$ B. $(x-2)(x^2 - 4x + 4)$ C. $(x-2)(x^2 + 2x - 4)$ D. $(x-2)(x^2 + 2x + 4)$</p>	<p>5. This is a portion of the graph of a polynomial function. Which could be the first term of the polynomial?</p>  <p>A. x^2 B. x^3 C. x^4 D. x^5</p>	<p>6. Which is equivalent to $(\sqrt{5})^3$?</p> <p>A. 5 B. $5^{\frac{1}{3}}$ C. $(5)^{\frac{2}{3}}$ D. $5^{\frac{3}{2}}$</p>



SOL DO Now 8

Name: _____

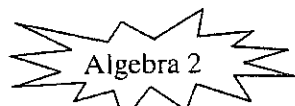
<p>1. Which equation is equivalent to:</p> $\frac{\frac{1}{x} - \frac{4}{y}}{\frac{2}{x} + \frac{5}{y}}$ <p>A. $\frac{x-4y}{5x+2y}$ B. $\frac{y-4x}{2y+5x}$ C. $\frac{x^2y^2}{(y-4x)(2y+5x)}$ D. $2y^2 - 3xy - 20x^2$</p>	<p>2.</p> <table border="1" data-bbox="633 1312 820 1501"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td>9</td> </tr> <tr> <td>0</td> <td>-1</td> </tr> <tr> <td>2</td> <td>-3</td> </tr> </tbody> </table> <p>The table shows some elements of a function. Which equation is <i>most</i> likely a rule for the function?</p> <p>A. $f(x) = -x - 1$ B. $f(x) = 2x^2 - 1$ C. $f(x) = x^2 - 2x - 1$ D. $f(x) = x^2 - 3x - 1$</p>	x	f(x)	-2	9	0	-1	2	-3	<p>3. The variables x and y vary directly, and $y = 42$ when $x = 3$. Which equation relates the variables?</p> <p>A. $y = 14x$ B. $y = 3x$ C. $y = 42x$ D. $y = \frac{1}{14}x$</p>
x	f(x)									
-2	9									
0	-1									
2	-3									
<p>4. Which is equivalent to $a^{\frac{1}{2}}b^{\frac{3}{4}}$</p> <p>A. ab^3 B. $\sqrt{ab^3}$ C. $\sqrt[3]{a^2b^4}$ D. $\sqrt[4]{a^2b^3}$</p>	<p>5. What is the solution set for $\sqrt{x+10} = 3\sqrt{2x+3}$?</p> <p>A. $\{1\}$ B. $\{-1\}$ C. $\{\frac{1}{2}\}$ D. $\{1/5\}$</p>	<p>6. When graphed, which of the following would produce a hyperbola?</p> <p>A. $x + y = 8$ B. $x^2 - y^2 = 8$ C. $y = x^2 - 8$ D. $x^2 + y^2 = 8$</p>								



SOL Do Now 9

Name: _____

<p>1. $A = \begin{bmatrix} 3 \\ -1 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & -2 \end{bmatrix}$</p> <p>Which matrix is the product $A \cdot B$?</p> <p>A. $\begin{bmatrix} 8 \end{bmatrix}$</p> <p>B. $\begin{bmatrix} 6 \\ 2 \end{bmatrix}$</p> <p>C. $\begin{bmatrix} 6 & 2 \end{bmatrix}$</p> <p>D. $\begin{bmatrix} 6 & -6 \\ -2 & 2 \end{bmatrix}$</p>	<p>2. $f(x) = x^2 - 2x$ $g(x) = x - 3$</p> <p>Which of the following expressions represents $g(f(x))$?</p> <p>A. $x^3 - 5x^2 + 6x$</p> <p>B. $x^2 - 2x - 3$</p> <p>C. $x^2 - 3x - 3$</p> <p>D. $x^2 - 8x + 9$</p>	<p>3. The time it takes to travel a given distance varies inversely as the average rate of speed. Averaging 42 mph, it takes Andre 5 hours to drive home. If it took him 4 hours and 20 minutes on his last trip, what was his average rate of speed?</p> <p>A. 36.4 mph</p> <p>B. 46.7 mph</p> <p>C. 48.5 mph</p> <p>D. 49.4 mph</p>
<p>4. Which is a zero of $f(x) = x^2 + x - 6$?</p> <p>A. -3</p> <p>B. -2</p> <p>C. 0</p> <p>D. 3</p>	<p>5. Which is a factor of $6a^2 + 5ab - 6b^2$?</p> <p>A. $(2a + 3b)$</p> <p>B. $(2a - 3b)$</p> <p>C. $(3a + 2b)$</p> <p>D. $(3a - 3b)$</p>	<p>6. If $a_n = 2^{n-1}$, then $a_4 =$ _____.</p> <p>A. 6</p> <p>B. 7</p> <p>C. 8</p> <p>D. 15</p>



SOL Do Now 10

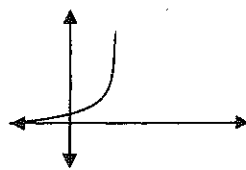
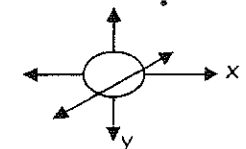
Name: _____

<p>1. What value of y is the solution to the equation $\frac{4y-10}{3} + \frac{6y+8}{2} = 9$?</p> <p>A. $y = 28/5$</p> <p>B. $y = 25/13$</p> <p>C. $y = 8/5$</p> <p>D. $y = 23/24$</p>	<p>2. Which is a zero of the function $f(x) = 3x - 12$?</p> <p>A. -12</p> <p>B. 0</p> <p>C. 3</p> <p>D. 4</p>	<p>3. Which is the solution to $3x-2 \leq 6$?</p> <p>A. $-\frac{4}{3} \leq x \leq \frac{8}{3}$</p> <p>B. $x \leq \frac{8}{3}$</p> <p>C. $x \geq -\frac{4}{3}$</p> <p>D. $x \leq \frac{8}{3}$ or $x \geq -\frac{4}{3}$</p>
<p>4. Which is equivalent to $(i^2)^3$?</p> <p>A. -1</p> <p>B. 1</p> <p>C. $-i$</p> <p>D. i</p>	<p>5. Which is equivalent to $64^{\frac{1}{3}}$?</p> <p>A. $\frac{1}{16}$</p> <p>B. 16</p> <p>C. $8\sqrt{2}$</p> <p>D. $\sqrt{64^3}$</p>	<p>6. What is the sum of the first 6 terms of the series $2 - 6 + 18 - 54 + \dots$?</p> <p>A. -364</p> <p>B. -40</p> <p>C. 122</p> <p>D. 1094</p>

Algebra 2

SOL Do Now 11

Name: _____

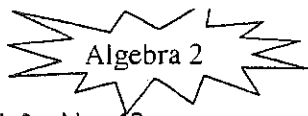
<p>1. Which of the following series is defined by $\sum_2^6 (n^2 - 1)$?</p> <p>A. $0 + 3 + 8 + 15 + 24 + 35$ B. $3 + 8 + 15 + 24 + 35$ C. $1 + 4 + 9 + 16 + 25 + 36$ D. $8 + 15 + 24 + 35$</p>	<p>2. What is the solution set for $x^2 = -5x + 4$?</p> <p>A. $\left\{ \frac{5 + \sqrt{41}}{2}, \frac{5 - \sqrt{41}}{2} \right\}$ B. $\{-5 + \sqrt{41}, -5 - \sqrt{41}\}$ C. $\{5 + \sqrt{41}, 5 - \sqrt{41}\}$ D. $\left\{ \frac{-5 + \sqrt{41}}{2}, \frac{-5 - \sqrt{41}}{2} \right\}$</p>	<p>3.</p> <div style="text-align: center;">  </div> <p>The graph above is an example of which type of function?</p> <p>A. Linear B. Cubic C. Logarithmic D. Exponential</p>
<p>4. What are the zeros of $f(x) = (x - 5)(x - 3)(x + 2)$?</p> <p>A. 0, 5, 3, and -2 B. 0, -5, -3, and 2 C. 1, 5, 3, and -2 D. 1, -5, -3, and 2</p>	<p>5. Which best describes the graph of $x^2 + y^2 = 16$?</p> <p>A. circle B. ellipse C. hyperbola D. parabola</p>	<p>6.</p> <div style="text-align: center;">  </div> <p>How many solutions are there for this system of equations?</p> <p>A. 0 B. 1 C. 2 D. 4</p>

Algebra 2

SOL Do Now 12

Name: _____

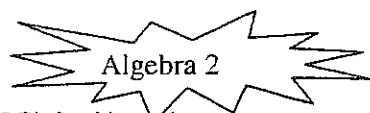
<p>1. Tickets to a concert cost \$2 for children (c), and \$4 for adults (a). Ticket sales totaled \$480, and 180 people attended. Which system of equations models this situation?</p> <p>A. $2c + 4a = 180$ $c + a = 480$ B. $2c + 4a = 480$ $c + a = 180$ C. $2c = 4a$ $180(c + a) = 480$ D. $2c + 4a = 480ac$ $c + a = 180ac$</p>	<p>2. What is the solution set for $\frac{x+3}{x} = \frac{x-3}{2}$?</p> <p>A. {2} B. {-3,3} C. {-1,6} D. {1,-6}</p>	<p>3. Whammy cereal comes in several different box sizes. The chart shows some sizes and the cost of each.</p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td>Ounces</td> <td>6</td> <td>8</td> <td>16</td> <td>32</td> </tr> <tr> <td>Price</td> <td>\$2.20</td> <td>\$2.80</td> <td>\$5.22</td> <td>\$9.98</td> </tr> </table> <p>One box sells for \$3.69. To the nearest ounce, how many ounces does it contain?</p> <p>A. 10 B. 11 C. 12 D. 14</p>	Ounces	6	8	16	32	Price	\$2.20	\$2.80	\$5.22	\$9.98
Ounces	6	8	16	32								
Price	\$2.20	\$2.80	\$5.22	\$9.98								
<p>4. For a new design, a furniture company projects its profits on the sale of n chairs using the equation $p(n) = 6n^2 + 8n - 4000$. Which form would a graph of the function have?</p> <p>A. A line B. A parabola C. An ellipse D. A hyperbola</p>	<p>5. What is $\frac{6a+12}{a} \cdot \frac{a^3}{a+2} = ?$</p> <p>A. $6a^2$ B. $6/a^2$ C. $\frac{6(a+2)}{a}$ D. $\frac{6a^2 + 24a + 24}{a^4}$</p>											



SOL Do Now 13

Name: _____

<p>1. Which is equivalent to $\frac{3x}{7} + \frac{5y}{14x}$?</p> <p>A. $\frac{8y}{21}$ B. $\frac{x^2}{14}$ C. $\frac{6x^2+5y}{14x}$ D. $\frac{3x^2+5y}{14x}$</p>	<p>2. Which of the following is an illustration of one of the associative properties?</p> <p>A. $(3x)y=y(3x)$ B. $3a^2 + 0 = 3a^2$ C. $2a(a-2)=2a^2 - 4a$ D. $(2a+1)+2b=2a+(1+2b)$</p>	<p>3. Which is the solution set for $2x^2 + 2x + 1 = 0$?</p> <p>A. $\left\{ \pm \frac{1}{2} \right\}$ B. $\{-1 \pm 1\}$ C. $\left\{ -\frac{1}{2} \pm \frac{1}{2}i \right\}$ D. $\left\{ -\frac{1}{2} \pm i \right\}$</p>
<p>4. A certain third degree polynomial function has zeros at -3, 2, and 3. Which could <u>not</u> be a factor of the expression that defines the function?</p> <p>A. $x + 3$ B. $x - 3$ C. $x + 2$ D. $x - 2$</p>	<p>5. In 1940 the life expectancy was 62.9 years. By 1980 it had increased to 73.7 years. Assuming a linear relationship, which is the best prediction of life expectancy in the year 2000?</p> <p>A. 76.4 B. 79.1 C. 79.9 D. 84.5</p>	<p>6. What is the simplified form for $\frac{x^2 - 9}{x^2 - 6x + 9}$?</p> <p>A. $\frac{1}{6x}$ B. $\frac{1}{x-3}$ C. $\frac{1}{x-3}$ D. $\frac{x-3}{x+3}$</p>



SOL Do Now 14

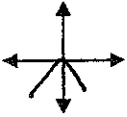
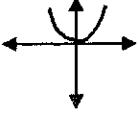
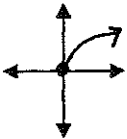
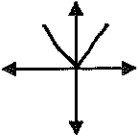
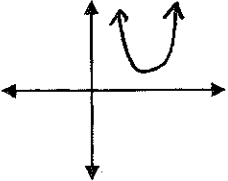
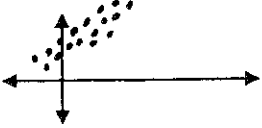
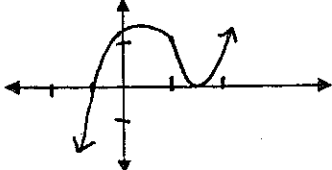
Name: _____

<p>1. Which expression is equivalent to $(6+2i)-(4+3i)$?</p> <p>A. $2-i$ B. $2+i$ C. $2+5i$ D. $10-i$</p>	<p>2. Which is the solution set for $x^2 - 4x = 5$?</p> <p>A. $\{1,5\}$ B. $\{-1,5\}$ C. $\{1,-5\}$ D. $\{-1,-5\}$</p>	<p>3. $Q = \begin{bmatrix} -1 & -3 \end{bmatrix}$ $R = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$</p> <p>Which matrix is $Q \cdot R$?</p> <p>A. $\begin{bmatrix} -5 \end{bmatrix}$ B. $\begin{bmatrix} -6 \end{bmatrix}$ C. $\begin{bmatrix} 2 & -3 \end{bmatrix}$ D. $\begin{bmatrix} 5 & -6 \end{bmatrix}$</p>
<p>4. If $\begin{cases} x+y=1 \\ 2y+z=3 \\ x+y-z=4 \end{cases}$, then $\begin{bmatrix} x \\ y \\ z \end{bmatrix} = ?$</p> <p>A. $\begin{bmatrix} -2 \\ 3 \\ -3 \end{bmatrix}$ B. $\begin{bmatrix} 4 \\ 10 \\ 0 \end{bmatrix}$</p> <p>C. $\begin{bmatrix} 1 \\ 0 \\ 3 \end{bmatrix}$ D. $\begin{bmatrix} 1 & 1 & 0 \\ 0 & 6 & 3 \\ 4 & 4 & -4 \end{bmatrix}$</p>		<p>5. Two geometric means between 2 and 54 are _____?</p> <p>A. 4 and 12 B. 6 and 12 C. 6 and 18 D. $19\frac{1}{2}$ and $36\frac{2}{3}$</p>

Algebra 2

SOL Do Now 15

Name: _____

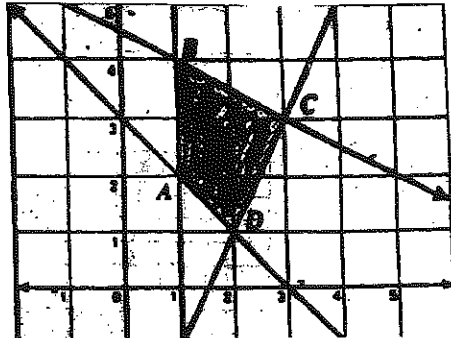
<p>1. Which best represents the graph of $y = x$?</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p>	<p>2. </p> <p>The graph of $f(x)$ is shown above. How many real solutions are there?</p> <p>A. 0 B. 1 C. 2 D. 3</p>	<p>3. How many zeros does the function $f(x) = -3x^4 + x + 2$ have ?</p> <p>A. 0 B. 1 C. 3 D. 4</p>
<p>4. What is the best prediction for the line of best fit for the scatterplot below?</p>  <p>A. $y = 2x+2$ B. $y = 2x-2$ C. $y = -2x+2$ D. $y = -2x-2$</p>	<p>5. What would the 11th term in the sequence 3, 7, 11, be ?</p> <p>A. 40 B. 43 C. 47 D. 51</p>	<p>6. The function graphed below apparently has a double root between which x values ?</p>  <p>A. 1 and 2 B. 0 and 1 C. 2 and 3 D. There are none</p>

Algebra 2
SOL Do Now #16

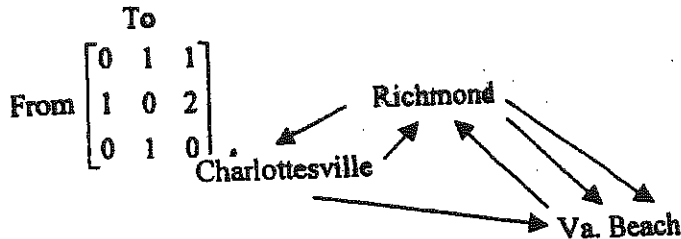
Name: _____

1 This graph of a linear programming model consists of polygon ABCD and its interior. Under these constraints, at which point does the minimum value of $3x - 2y$ occur?

- A. A
- B. B
- C. C
- D. D



2



The matrix below shows the number of non-stop daily flights between three cities as shown in the directed graph above. Squaring this matrix gives the number of 1-stop routes between these three cities. Which matrix shows the number of 1-stop routes?

- A. $\begin{bmatrix} 0 & 2 & 2 \\ 2 & 0 & 4 \\ 0 & 2 & 0 \end{bmatrix}$
- B. $\begin{bmatrix} 1 & 1 & 2 \\ 0 & 3 & 1 \\ 1 & 0 & 2 \end{bmatrix}$
- C. $\begin{bmatrix} 2 & 2 & 1 \\ 2 & 5 & 0 \\ 1 & 0 & 1 \end{bmatrix}$
- D. $\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 4 \\ 0 & 1 & 0 \end{bmatrix}$

3

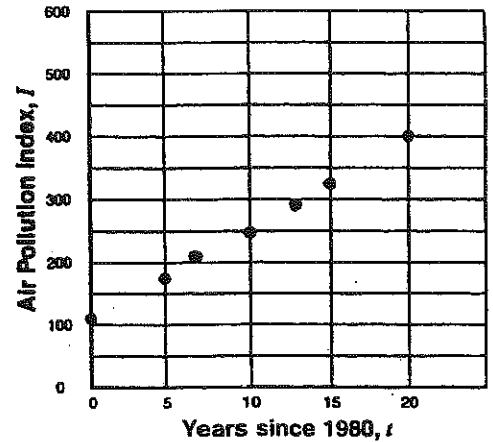
Using the data in the table, predict the cost of 10 gallons of gasoline.

Gasoline Costs	
Gallons Bought	Dollars Spent
5	7.45
2	2.90
4	5.92
7	10.29

- F \$14.00
- G \$14.80
- H \$15.60
- J \$16.20

4

A city began recording its air pollution index in 1980. The scatterplot shows the index related to various numbers of years since 1980.



If no steps are taken to control city air pollution, which is the best estimate for the pollution index in 2005?

- A 425
- B 475
- C 525
- D 600

5

For a psychology report, Cathy compared the length in minutes of her little brother's afternoon nap with the hours of sleep he received the previous night.

Hours of Sleep x	Minutes of Naptime y
4.5	160
5.5	160
6.0	170
7.0	130
7.5	120
8.0	90
8.0	180
8.5	80
8.5	120
9.0	100
9.5	60
10.0	90
10.5	0
11.0	30

Which is most likely the line of best fit for the data?

- A $y = -23.39x + 296.04$
- B $y = -0.03x + 11.26$
- C $y = 11.26x - 0.03$
- D $y = 296.04x - 23.39$

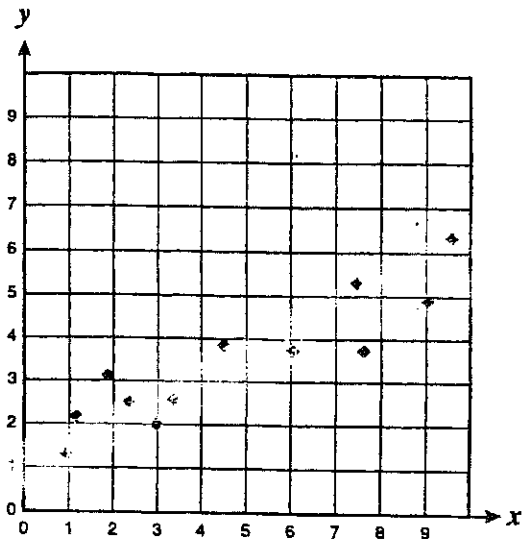
6) The area (A) of a circle varies directly as the square of the radius (r). If k is the constant of proportionality, which is the formula for this relationship?

- A. $A = \frac{k}{r^2}$
- B. $A = kr$
- C. $A = kr^2$
- D. $r = kA^2$

7) The frequency of a radio signal varies inversely as the wave length. A signal of frequency 1200 kilohertz(kHz), which might be the frequency of an AM radio station, has wave length 250 m. What frequency has a signal of wave length of 400 m?

- F. 83 kHz
- G. 750 kHz
- H. 1350 kHz
- J. 1920 kHz

8)



Which equation is nearest to the line of best fit of the data in this scatterplot?

- A. $y = x$
- B. $y = \frac{1}{2}x + 1$
- C. $y = 2x$
- D. $y = \sqrt{x} + 2$

9) The volume (V) of a sphere varies directly with the cube of its radius (r). If k is the constant of proportionality, which is the formula for this relationship?

- A. $V = kr$
- B. $V = kr^3$
- C. $V = \frac{k}{r^3}$
- D. $r = kV^3$

10) What type of correlation would you expect the following to have?

weight of a baby at birth and the day of the week the baby is born

- A. no correlation
- B. strong negative correlation
- C. weak positive correlation
- D. strong positive correlation

11) Which is equivalent to $16^{\frac{3}{2}}$?

- A. 4
- B. 8
- C. 12
- D. 32

12) What is the solution set for $x^2 + 6x - 16 = 0$?

- A. $\{0,4\}$
- B. $\{-8,2\}$
- C. $\{-3,5\}$
- D. $\{-2,8\}$

