

VIRGINIA STANDARDS OF LEARNING

**Released Test**

# **ALGEBRA II**

## **2009 Mathematics Standards of Learning**

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Released Spring 2014

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**SAMPLE A**

Which expression is equivalent to  $\sqrt{\frac{7x}{16}}$  ?

**A**  $\frac{7x}{4}$

**B**  $\frac{7x}{8}$

**C**  $\frac{\sqrt{7x}}{4}$

**D**  $\frac{\sqrt{7x}}{8}$

Directions: Type your answer in the box.

**SAMPLE B**

What value of  $x$  makes  $\sqrt{x} - 3 = 6$  true?

Which expression is equivalent to  $\frac{3n}{n+3} + \frac{5}{n-4}$  if no denominator equals zero?

A  $\frac{3n^2 - 7n + 3}{(n+3)(n-4)}$

B  $\frac{3n^2 - 7n + 15}{(n+3)(n-4)}$

C  $\frac{3n^2 + 5n + 3}{(n+3)(n-4)}$

D  $\frac{3n^2 + 5n + 15}{(n+3)(n-4)}$

Which number is equivalent to  $(-6 - i) + 5i - (11 + 13i)$  ?

- A  $-17 - 9i$
- B  $-17 + 17i$
- C  $-5 - 9i$
- D  $-5 + 17i$

Which of the following is the factored form of  $x^3 - 216$  ?

- A  $(x - 6)^3$
- B  $(x - 6)(x^2 + 36)$
- C  $(x - 6)(x^2 + 12x + 36)$
- D  $(x - 6)(x^2 + 6x + 36)$

Which expression is equivalent to  $\sqrt{75x^3} - \sqrt{27x^3}$ , if  $x > 0$  ?

- A  $4x\sqrt{6x}$
- B  $4x\sqrt{3x}$
- C  $2x\sqrt{6x}$
- D  $2x\sqrt{3x}$

Assuming that no denominator equals zero, which is equivalent to  $\frac{r^2 - r - 6}{(r - 2)(r - 3)}$  ?

- A  $\frac{r+2}{r-2}$
- B  $\frac{r+3}{r-3}$
- C  $\frac{r+2}{r-1}$
- D  $\frac{2(r-1)}{r-2}$



Which expression is equivalent to  $\sqrt[4]{16x^{15}y^{17}}$ , where  $x > 0$  and  $y > 0$ ?

A  $4x^{11}y^{13}$

B  $4x^{\frac{15}{4}}y^{\frac{17}{4}}$

C  $2x^{11}y^{13}$

D  $2x^{\frac{15}{4}}y^{\frac{17}{4}}$

Which is equivalent to  $(6 + \sqrt{7})(5 + \sqrt{7})$  ?

- A  $11 + 2\sqrt{7}$
- B  $30 + 11\sqrt{7}$
- C  $30 + 18\sqrt{7}$
- D  $37 + 11\sqrt{7}$

Directions: Click and drag each selected term to the correct box.

Simplify completely:  $\sqrt[3]{162x^6y^7}$

$$\boxed{\phantom{000}} \sqrt[3]{\boxed{\phantom{000000}}}$$

2	3	6	9
$x$	$x^2$	$x^3$	$x^4$
$y$	$y^2$	$y^3$	$y^4$

Which expression is equivalent to  $x^{\frac{3}{7}}y^{\frac{36}{7}}$  ?

A  $\frac{1}{7}\sqrt{x^3y^{36}}$

B  $\frac{1}{7}y^5\sqrt{x^3y}$

C  $y^5\sqrt[7]{x^3y}$

D  $x^3y^5\sqrt[7]{y}$

Directions: Click and drag each selected binomial to the box.

Factor the following polynomial.

$$8x^2 - 18xy - 5y^2 =$$

$(x + 5y)$

$(2x - 5y)$

$(2x - y)$

$(4x + y)$

$(4x + 5y)$

$(8x - y)$

**Which statement illustrates the symmetric property of equality?**

- A** If  $7\sqrt{x} + 17i = 49i$ , then  $7\sqrt{x} + 17i = 49i$ .
- B** If  $7\sqrt{x} + 17i = 49i$ , then  $49i = 7\sqrt{x} + 17i$ .
- C** If  $7\sqrt{x} + 17i = 49i$  and  $49i = 12\sqrt{x} - 3i$ , then  $7\sqrt{x} + 17i = 12\sqrt{x} - 3i$ .
- D** If  $7\sqrt{x} + 17i = 49i$  and  $7\sqrt{x} + 17i - y = -35i$ , then  $49i - y = -35i$ .

Directions: Click on the box to choose each expression you want to select. You must select all the correct expressions.

Identify each expression that is equivalent to  $(i)$ .

$i^{47}$	$i^{33}$	$i^{21}$	$i^{15}$
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Given:

$$\frac{\frac{n - 15}{9n}}{\frac{15 - n}{3n^5}}$$

Assuming no denominator equals zero, which expression is equivalent to the given expression?

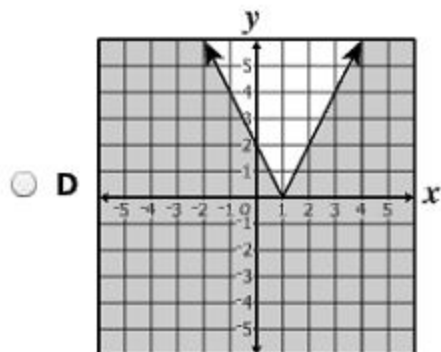
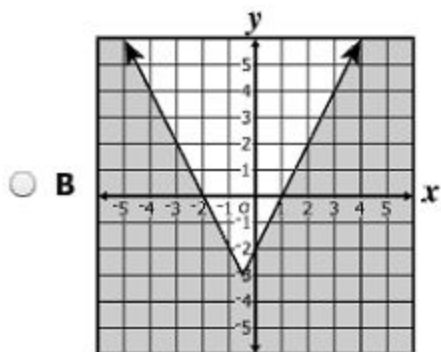
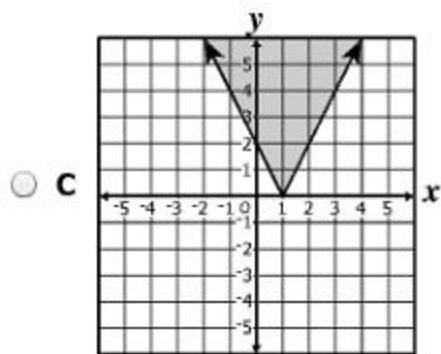
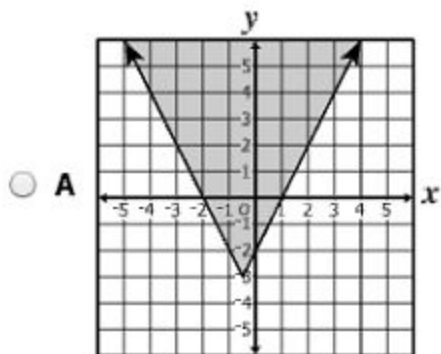
- A  $\frac{-n^4}{3}$
- B  $\frac{n^4}{3}$
- C  $\frac{-3}{n^4}$
- D  $\frac{3}{n^4}$



What is the solution set of  $\sqrt{8x-1} + 4 = 8$  ?

- A  $\left\{\frac{67}{8}\right\}$
- B  $\left\{\frac{61}{8}\right\}$
- C  $\left\{\frac{17}{8}\right\}$
- D  $\left\{\frac{15}{8}\right\}$

Which graph best represents the solution for  $y \geq |2x + 1| - 3$ ?



Directions: Click on the correct answer.

What is the solution set to  $x^2 = 16 - 4x$  ?

$\{\pm 4\}$

$\{2 \pm 2\sqrt{5}\}$

$\{2 \pm 2i\sqrt{3}\}$

$\{-2 \pm 2\sqrt{5}\}$

$\{-2 \pm 2i\sqrt{3}\}$

What is the solution set for  $\sqrt[3]{\frac{1}{4}x + 3} = 2$  ?

A  $\left\{\frac{5}{4}\right\}$

B  $\left\{\frac{11}{4}\right\}$

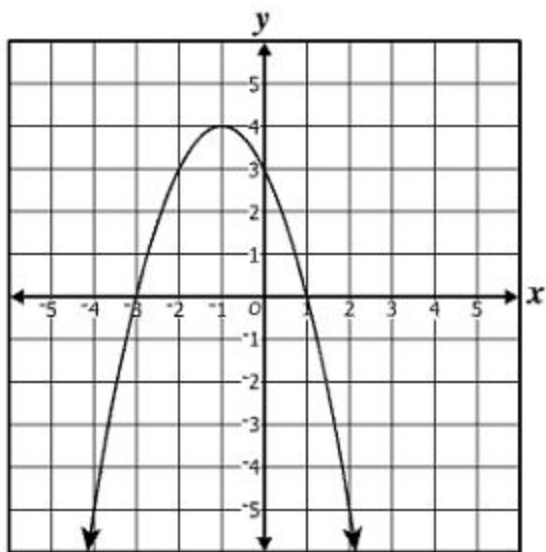
C  $\{20\}$

D  $\{44\}$

What is the solution to  $|x + 4| < 2$  ?

- A  $x < -6$  or  $x > -2$
- B  $-6 < x < -2$
- C  $x < -2$
- D  $2 < x < 6$

The graph of  $g(x)$  is shown.



Which appears to be a solution of  $g(x) = 0$  ?

- A -3
- B -1
- C 0
- D 3

Given: 
$$\begin{cases} x + y + 10 = 0 \\ x^2 + y - 2 = 0 \end{cases}$$

What are the  $x$ -values for the solutions to the given system of equations?

- A  $x = -3, -7$
- B  $x = -3, 4$
- C  $x = -4, 3$
- D  $x = 4, -14$

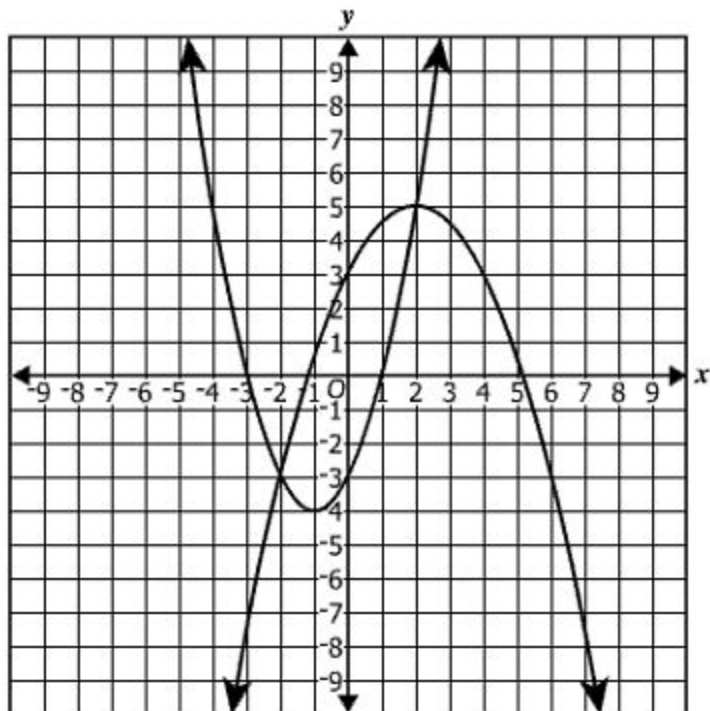
Which is a solution for  $\sqrt[4]{w-4} + 11 = 14$  ?

- A  $w = 8$
- B  $w = 16$
- C  $w = 77$
- D  $w = 85$



Directions: Click on the grid to plot each point that is a solution. You must plot all correct solutions.

The graph of a system of two equations is shown on the grid. Identify only the apparent solutions to this system of equations.



Which is a solution to  $\frac{4n-37}{3} = \frac{10}{n}$ , if  $n \neq 0$ ?

A -10

B  $-\frac{27}{4}$

C  $-\frac{10}{11}$

D  $-\frac{3}{4}$

Which is a solution of  $|2x - 7| + 1 = 9$  ?

**A**  $x = \frac{17}{2}$

**B**  $x = \frac{1}{2}$

**C**  $x = -\frac{1}{2}$

**D**  $x = -\frac{3}{2}$

Directions: Type your answer in the box.

If  $x \neq 0$ , what is the solution to the following equation?

$$\frac{1-x}{x} + 2 = \frac{7}{x}$$

$x =$

A solution to a quadratic equation is  $13 - 11i\sqrt{7}$ . Which of the following must also be a solution to this equation?

- A  $-13 - 11i\sqrt{7}$
- B  $-13 + 11i\sqrt{7}$
- C  $13 - 11i\sqrt{7}$
- D  $13 + 11i\sqrt{7}$

Which of the following functions does NOT have a range of only the real numbers greater than or equal to zero?

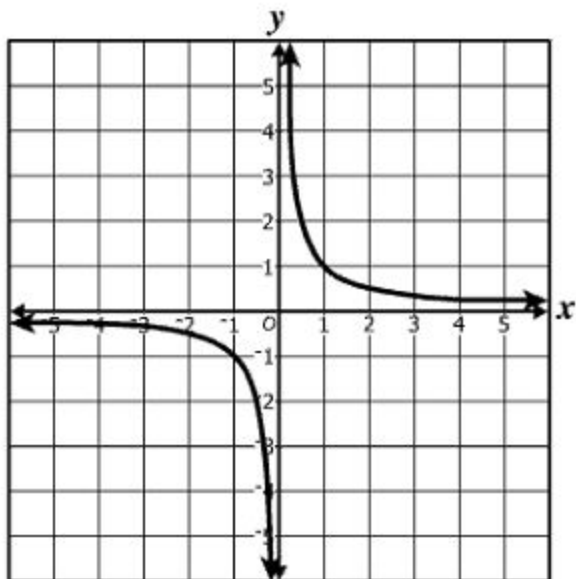
- A  $f(x) = \sqrt{4-x}$
- B  $f(x) = |x-4|$
- C  $f(x) = x^4$
- D  $f(x) = \log x$

Directions: Type your answer in the box.

What is the sum of this infinite series?

$$100 + 60 + 36 + \frac{108}{5} + \dots$$

The graph of a parent function is shown.



Which function belongs to this same family?

- A  $g(x) = -\log(x - 1)$
- B  $g(x) = \left(\frac{1}{3}\right)^{(x-1)}$
- C  $g(x) = 3^{(x-1)}$
- D  $g(x) = \frac{3}{x-1}$



Which number is a zero of  $f(x) = \log(4x - 1)$  ?

A  $\frac{7}{2}$

B  $\frac{11}{4}$

C  $\frac{1}{2}$

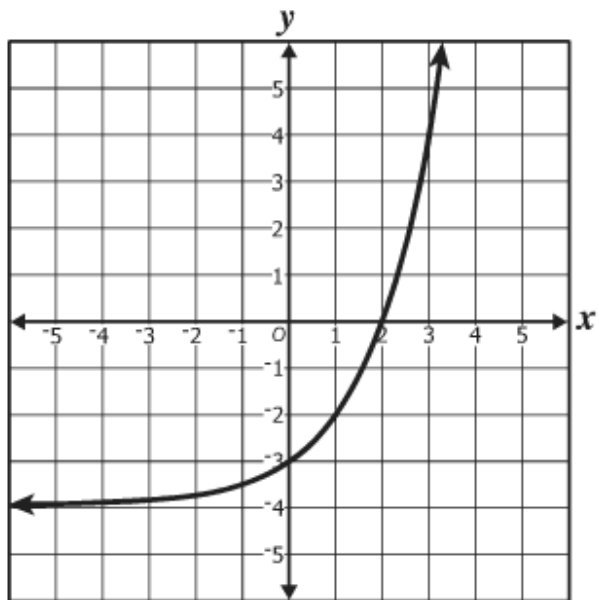
D  $\frac{1}{4}$

What is the equation of the horizontal asymptote of the graph of the following equation?

$$f(x) = 6^{(x-5)} - 4$$

- A  $y = 6$
- B  $y = 0$
- C  $y = -4$
- D  $y = -5$

Which function best represents this graph?



- A  $f(x) = 2^{(x+2)}$
- B  $f(x) = 2^{(x-2)}$
- C  $f(x) = 2^x - 3$
- D  $f(x) = 2^x - 4$

The graph of  $g(x) = \log(2x)$  has —

- A no  $x$ -intercept or  $y$ -intercept
- B one  $x$ -intercept and no  $y$ -intercept
- C two  $x$ -intercepts and no  $y$ -intercept
- D one  $x$ -intercept and one  $y$ -intercept

Throughout which of the following intervals is  $f(x) = (x - 1)(x - 4)^2$  only decreasing?

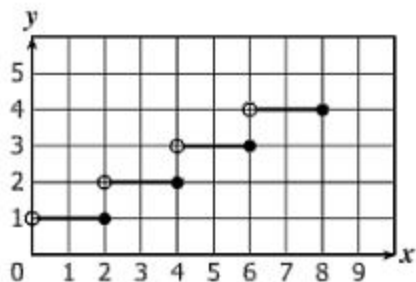
- A  $-\infty < x < 0$
- B  $-\infty < x < 1$
- C  $1 < x < 4$
- D  $2 < x < 4$

**Given:**  $f(x) = \log(x - 16) + 15$

**What is the equation of an asymptote of the graph of the given function?**

- A**  $x = 16$
- B**  $y = 16$
- C**  $x = 15$
- D**  $y = 15$

The graph of a function is shown on the grid.



What appears to be the range of this function?

- A  $\{y \mid y = 1, 2, 3, 4\}$
- B  $\{y \mid y = 0, 2, 4, 6, 8\}$
- C  $\{y \mid 1 < y < 4\}$
- D  $\{y \mid 0 < y < 8\}$

The heights of a large population of ostriches are normally distributed. Which is closest to the percentage of these heights that is within 3 standard deviations of the mean?

- A 0.3%
- B 5%
- C 95%
- D 99.7%



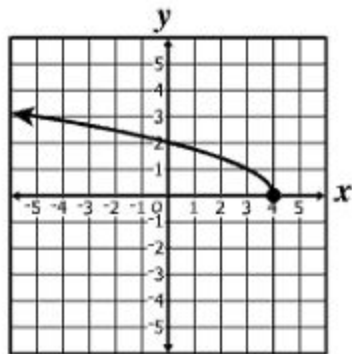
**Which of these situations involves a combination?**

- A** Determining how many different groups of 3 employees can be chosen from 10 employees
- B** Determining how many different seating charts can be made placing 7 people around a table
- C** Determining how many different ways 8 runners can be assigned lanes on a track for a preliminary race
- D** Determining how many different 6-letter passwords can be made using the letters in the word "pencil"

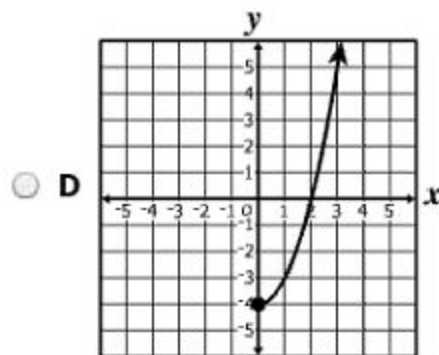
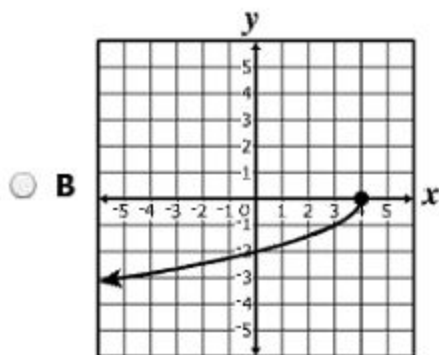
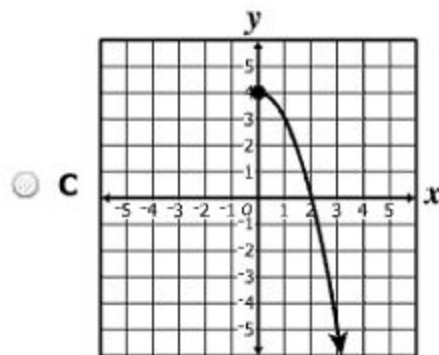
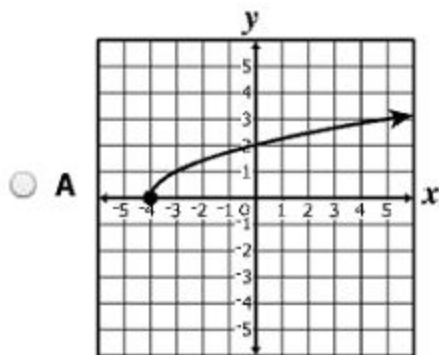
What is the 14th term of the arithmetic sequence with a first term of 7 and a common difference of 10 ?

- A 130
- B 137
- C 147
- D 221

The graph of the function  $g$  is shown on the following grid.



Which graph best represents the inverse of  $g$ ?



Directions: Click on a box to choose each ordered pair you want to select. You must select all correct ordered pairs.

Identify each of the  $x$ - and  $y$ -intercepts of the function  $h(x) = x^3 + 3x^2 - 4x - 12$ .

<input type="checkbox"/> (-3, 0)	<input type="checkbox"/> (0, -2)
<input type="checkbox"/> (-2, 0)	<input type="checkbox"/> (0, 0)
<input type="checkbox"/> (0, -12)	<input type="checkbox"/> (0, 2)
<input type="checkbox"/> (0, -3)	<input type="checkbox"/> (2, 0)

Which of the following describes the end behavior of  $y = -x^2 + bx + c$  as  $x$  approaches either positive or negative infinity?

- A  $y$  approaches positive infinity
- B  $y$  approaches negative infinity
- C  $y$  approaches  $c$
- D  $y$  approaches  $-\frac{c}{b}$

If  $f(x) = \frac{2}{3}x^2 + 1$  and  $g(x) = 6x - 15$ , which polynomial is equivalent to  $g(f(x))$ ?

- A  $4x^2 - 13$
- B  $4x^2 - 9$
- C  $4x^3 - 10x^2 + 6x - 15$
- D  $16x^2 - 80x + 101$

The domain of the function  $f(x) = \frac{x+3}{x^2+5x-24}$  is all real numbers except —

- A -8, -3, 3
- B -8, 3
- C -3, 8
- D 8

The amount of work ( $W$ ) done when lifting an object varies jointly with the mass of the object ( $M$ ) and the distance the object is lifted ( $D$ ). Which equation models this relationship?

**A**  $W = \frac{k}{MD}$

**B**  $W = \frac{kM}{D}$

**C**  $W = kMD$

**D**  $W = \frac{kD}{M}$



Madison deposited \$1,000 into a savings account that compounds interest yearly. After her initial deposit, Madison did not withdraw or deposit any money from this account. The table below shows the amount in her savings account over a period of years.

**Amount in Savings Account**

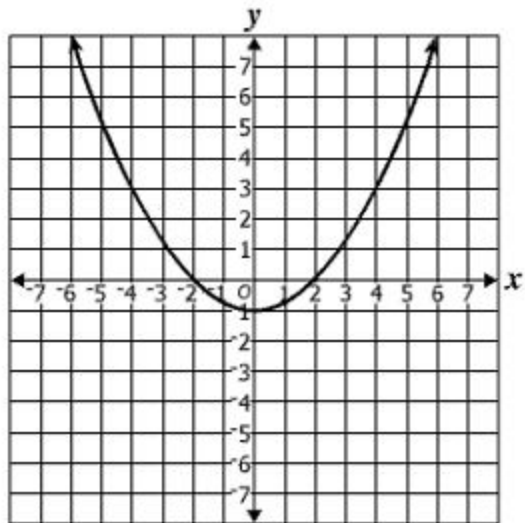
<b>Number of Years After the Deposit</b>	<b>Amount in Savings</b>
2	\$1,123.60
4	\$1,262.48
6	\$1,418.52
8	\$1,593.85
10	\$1,790.85

Using the exponential curve of best fit, which is closest to the expected amount in the savings account 30 years after the time Madison deposited the initial \$1,000 ?

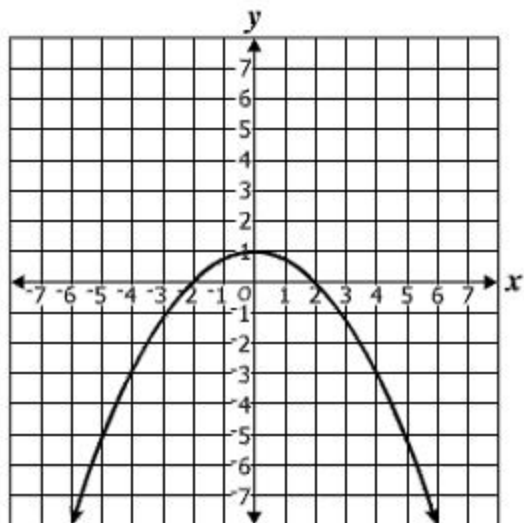
- A \$2,854
- B \$3,291
- C \$5,743
- D \$16,854

Which graph best represents a function with zeros of  $-2$ ,  $-1$ , and  $2$  ?

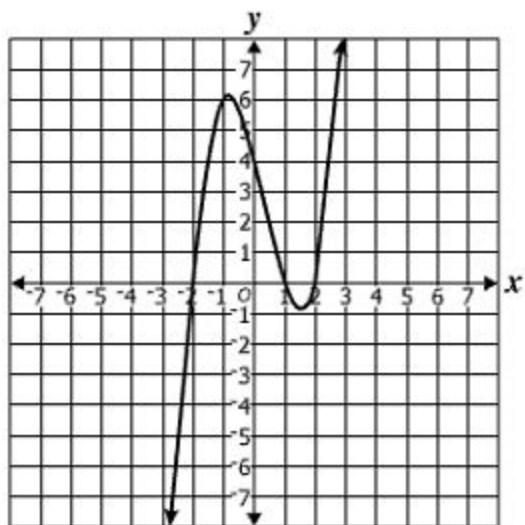
A



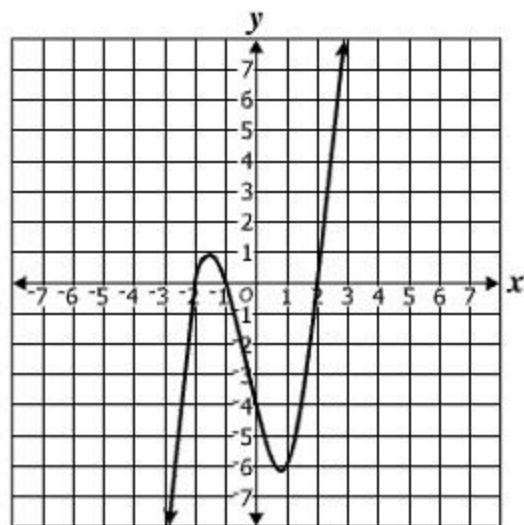
C



B



D



The number of permutations of 8 objects taken 3 at a time is —

- A 40,320
- B 6,720
- C 4,920
- D 336

If  $y$  varies inversely as the square root of  $x$ , what is the constant of proportionality if  $y = 16$  when  $x = 4$  ?

- A 4
- B 8
- C 32
- D 64

Which of the following describes the root(s) of the equation  $9x^2 = 6x - 1$  ?

- A Exactly one real root
- B Two distinct real roots
- C Exactly one imaginary root
- D Two distinct imaginary roots

**Algebra II**  
**Released Test Spring 2014**  
**Answer Key**

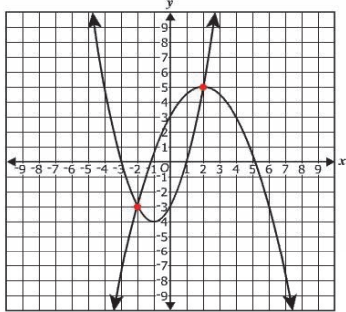
Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description						
1	MC	B	001	Expressions and Operations						
2	MC	A	001	Expressions and Operations						
3	MC	D	001	Expressions and Operations						
4	MC	D	001	Expressions and Operations						
5	MC	A	001	Expressions and Operations						
6	MC	D	001	Expressions and Operations						
7	MC	D	001	Expressions and Operations						
8	TEI	<p><math>3</math>, <math>x^2</math>, and <math>y^2</math> should be placed in the box to the left of the radical sign. The order in which these are placed in this box does not matter.</p> <p><math>6</math> and <math>y</math> should be placed in the box to the right of the radical sign. The order in which these are placed in this box does not matter.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p style="font-size: small; margin: 0;">Directions: Click and drag each selected term to the correct box.</p> <p style="margin: 10px 0 0 20px;">Simplify completely: <math>\sqrt[3]{162x^6y^7}</math></p> <div style="display: flex; align-items: center; justify-content: center; margin: 10px 0;"> <div style="border: 1px solid gray; padding: 2px 5px; margin-right: 5px;"><math>3x^2y^2</math></div> <div style="margin-right: 5px;"><math>\sqrt[3]{</math></div> <div style="border: 1px solid gray; padding: 2px 5px; margin-right: 5px;"><math>6y</math></div> <div style="margin-right: 5px;"><math>}</math></div> <div style="border: 1px solid gray; padding: 5px;"> <table style="border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 5px;">2</td> <td style="padding: 2px 5px;">9</td> </tr> <tr> <td style="padding: 2px 5px;">x</td> <td style="padding: 2px 5px;"><math>x^3</math> <math>x^4</math></td> </tr> <tr> <td style="padding: 2px 5px;"></td> <td style="padding: 2px 5px;"><math>y^3</math> <math>y^4</math></td> </tr> </table> </div> </div> </div>	2	9	x	$x^3$ $x^4$		$y^3$ $y^4$	001	Expressions and Operations
2	9									
x	$x^3$ $x^4$									
	$y^3$ $y^4$									

Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description
9	MC	C	001	Expressions and Operations
10	TEI	<p><math>(2x - 5)</math> (the second answer from the left) and <math>(4x + y)</math> (the fourth answer from the left) must be placed inside the box.</p> <p>Both of these answers, and only these answers, must be selected. The order in which they are placed in the box does not matter.</p> <div data-bbox="495 586 1398 1133" style="border: 1px solid black; padding: 10px;"> <p style="background-color: #cccccc; margin: 0; padding: 2px;">Directions: Click and drag each selected binomial to the box.</p> <p style="margin: 10px 0 0 0;">Factor the following polynomial.</p> <p style="margin: 0 0 0 40px;"><math>8x^2 - 18xy - 5y^2 =</math> <span style="border: 1px solid gray; padding: 2px;"><math>(2x - 5y)</math></span> <span style="border: 1px solid gray; padding: 2px;"><math>(4x + y)</math></span></p> <div style="margin: 10px 0 0 40px; display: flex; gap: 10px;"> <span style="border: 1px solid gray; padding: 2px;"><math>(x + 5y)</math></span> <span style="border: 1px solid gray; padding: 2px;"><math>(2x - y)</math></span> <span style="border: 1px solid gray; padding: 2px;"><math>(4x + 5y)</math></span> <span style="border: 1px solid gray; padding: 2px;"><math>(8x - y)</math></span> </div> </div>	001	Expressions and Operations
11	MC	B	001	Expressions and Operations

Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description
12	TEI	<p><math>i^{33}</math> (the second box from the left) and <math>i^{21}</math> (the third box from the left) Both of these answers, and only these answers, must be selected.</p> <div data-bbox="489 480 1394 1024" style="border: 1px solid black; padding: 10px;"> <p>Directions: Click on the box to choose each expression you want to select. You must select all the correct expressions.</p> <p>Identify each expression that is equivalent to <math>i</math>.</p> <div style="text-align: center;"> <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; padding: 2px 5px;"><math>i^{47}</math></div> <div style="border: 1px solid gray; padding: 2px 5px;"><math>i^{33}</math></div> <div style="border: 1px solid gray; padding: 2px 5px;"><math>i^{21}</math></div> <div style="border: 1px solid gray; padding: 2px 5px;"><math>i^{15}</math></div> </div> </div> </div>	001	Expressions and Operations
13	MC	A	001	Expressions and Operations
14	MC	C	002	Equations and Inequalities
15	MC	A	002	Equations and Inequalities



Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description
16	TEI	$\{-2 \pm 2\sqrt{5}\}$ (the fourth box from the top) <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> <p>Directions: Click on the correct answer.</p> <p>What is the solution set to <math>x^2 = 16 - 4x</math> ?</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px auto; width: fit-content;"> <input type="radio"/> <math>\{\pm 4\}</math> </div> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <input type="radio"/> <math>\{2 \pm 2\sqrt{5}\}</math> </div> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <input type="radio"/> <math>\{2 \pm 2i\sqrt{3}\}</math> </div> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <input checked="" type="radio"/> <math>\{-2 \pm 2\sqrt{5}\}</math> </div> <div style="border: 1px solid gray; padding: 5px; margin: 5px auto; width: fit-content;"> <input type="radio"/> <math>\{-2 \pm 2i\sqrt{3}\}</math> </div> </div>	002	Equations and Inequalities
17	MC	C	002	Equations and Inequalities
18	MC	B	002	Equations and Inequalities
19	MC	A	002	Equations and Inequalities
20	MC	B	002	Equations and Inequalities
21	MC	D	002	Equations and Inequalities

Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description
22	TEI	<p>Points <math>(-2, -3)</math> and <math>(2, 5)</math> Both of these points, and only these points, must be plotted on the coordinate plane.</p> <p><b>Directions:</b> Click on the grid to plot each point that is a solution. You must plot all correct solutions.</p> <p>The graph of a system of two equations is shown on the grid. Identify only the apparent solutions to this system of equations.</p> 	002	Equations and Inequalities
23	MC	D	002	Equations and Inequalities
24	MC	C	002	Equations and Inequalities

Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description
25	TEI	Typed Response: 6 (and all equivalent answers) <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="background-color: #cccccc; margin: 0; padding: 2px;">Directions: Type your answer in the box.</p> <p style="margin: 10px 0 0 40px;">If <math>x \neq 0</math>, what is the solution to the following equation?</p> <math display="block">\frac{1-x}{x} + 2 = \frac{7}{x}</math> <p style="margin: 10px 0 0 40px;"><math>x = </math> <input style="width: 50px; border: 1px solid gray;" type="text" value="6"/></p> </div>	002	Equations and Inequalities
26	MC	D	002	Equations and Inequalities
27	MC	D	003	Functions and Statistics

Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description
28	TEI	Typed Response: 250 (and all equivalent answers) <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="background-color: #cccccc; margin: 0; padding: 2px;">Directions: Type your answer in the box.</p> <p style="margin: 10px 0 0 40px;">What is the sum of this infinite series?</p> <math display="block" style="margin: 10px 0 0 80px;">100 + 60 + 36 + \frac{108}{5} + \dots</math> <div style="margin: 10px 0 0 120px;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="text" value="250"/> </div> </div>	003	Functions and Statistics
29	MC	D	003	Functions and Statistics
30	MC	C	003	Functions and Statistics
31	MC	C	003	Functions and Statistics
32	MC	D	003	Functions and Statistics
33	MC	B	003	Functions and Statistics
34	MC	D	003	Functions and Statistics
35	MC	A	003	Functions and Statistics
36	MC	A	003	Functions and Statistics
37	MC	D	003	Functions and Statistics
38	MC	A	003	Functions and Statistics
39	MC	B	003	Functions and Statistics

Test Sequence Number	Item Type: Multiple Choice (MC) or Technology Enhanced Item (TEI)	Correct Answer	Reporting Category	Reporting Category Description								
40	MC	C	003	Functions and Statistics								
41	TEI	<p><math>(-3,0)</math>, <math>(-2,0)</math>, <math>(0,-12)</math>, and <math>(2,0)</math>  All four ordered pairs, and only these ordered pairs, must be selected.</p> <p>Directions: Click on a box to choose each ordered pair you want to select. You must select all correct ordered pairs.</p> <p>Identify each of the <math>x</math>- and <math>y</math>-intercepts of the function <math>h(x) = x^3 + 3x^2 - 4x - 12</math>.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><input checked="" type="checkbox"/> <math>(-3, 0)</math></td> <td><input type="checkbox"/> <math>(0, -2)</math></td> </tr> <tr> <td><input checked="" type="checkbox"/> <math>(-2, 0)</math></td> <td><input type="checkbox"/> <math>(0, 0)</math></td> </tr> <tr> <td><input checked="" type="checkbox"/> <math>(0, -12)</math></td> <td><input type="checkbox"/> <math>(0, 2)</math></td> </tr> <tr> <td><input type="checkbox"/> <math>(0, -3)</math></td> <td><input checked="" type="checkbox"/> <math>(2, 0)</math></td> </tr> </table>	<input checked="" type="checkbox"/> $(-3, 0)$	<input type="checkbox"/> $(0, -2)$	<input checked="" type="checkbox"/> $(-2, 0)$	<input type="checkbox"/> $(0, 0)$	<input checked="" type="checkbox"/> $(0, -12)$	<input type="checkbox"/> $(0, 2)$	<input type="checkbox"/> $(0, -3)$	<input checked="" type="checkbox"/> $(2, 0)$	003	Functions and Statistics
<input checked="" type="checkbox"/> $(-3, 0)$	<input type="checkbox"/> $(0, -2)$											
<input checked="" type="checkbox"/> $(-2, 0)$	<input type="checkbox"/> $(0, 0)$											
<input checked="" type="checkbox"/> $(0, -12)$	<input type="checkbox"/> $(0, 2)$											
<input type="checkbox"/> $(0, -3)$	<input checked="" type="checkbox"/> $(2, 0)$											
42	MC	B	003	Functions and Statistics								
43	MC	B	003	Functions and Statistics								
44	MC	B	003	Functions and Statistics								
45	MC	C	003	Functions and Statistics								
46	MC	C	003	Functions and Statistics								
47	MC	D	003	Functions and Statistics								
48	MC	D	003	Functions and Statistics								
49	MC	C	003	Functions and Statistics								
50	MC	A	003	Functions and Statistics								

**Spring 2014 Released**  
**Algebra II Standards of Learning Test**  
**Total Raw Score to Scaled Score Conversion Table**

<b>Total Raw Score</b> If you get this many items correct:	<b>Total Scaled Score</b> Then your converted scaled score is:
0	0
1	159
2	198
3	222
4	239
5	253
6	265
7	275
8	284
9	293
10	300
11	307
12	314
13	321
14	327
15	333
16	338
17	344
18	349
19	355
20	360
21	365
22	370
23	375
24	380
25	385
26	390
27	395
<b>28</b>	<b>400</b>
29	405
30	411
31	416
32	421
33	427
34	433
35	439
36	445
37	451
38	458
39	465
40	473
41	481
42	490
43	499
<b>44</b>	<b>510</b>
45	523
46	538
47	557
48	582
49	600
50	600

A **total raw score** (left column) is converted to a **total scaled score** (right column). The total scaled score may range from 0 to 600.

A scaled score of 400 or more means the student passed the SOL test, while a scaled score of 399 or less means the student did not pass the test. A scaled score of 500 or more indicates the student passed the SOL test at an advanced level.

