

① **Example Stem:** Select an expression that is equivalent to $\sqrt[4]{x^{\frac{2}{3}}}$.

- A. $x^{\frac{1}{4}}$
- B. $x^{\frac{9}{4}}$
- C. $x^{\frac{1}{6}}$
- D. $x^{\frac{8}{3}}$

② **Example Stem:** Select an expression that is equivalent to $3^{\frac{6}{9}}$.

- A. $\sqrt[9]{3^6}$
- B. $\sqrt[6]{3^9}$
- C. $\sqrt{3^3}$
- D. $\sqrt[3]{3}$

③ **Example Stem:** Select an expression that is equivalent to $\sqrt[3]{3^6}$.

- A. $3^{\frac{2}{3}}$
- B. $3^{\frac{3}{2}}$
- C. 3^3
- D. 3^{15}

④ **Example Stem 2:** Determine whether each expression is equivalent to $(2x^3)^{\frac{2}{5}}$. Select Yes or No for each expression.

	Yes	No
$\sqrt[5]{4x^6}$		
$x\sqrt[5]{4}$		
$\sqrt[5]{2x^6}$		
$x\sqrt[5]{4x}$		
$\sqrt[5]{4x^3}$		

⑤ **Example Stem 2:** Select an expression that is equivalent to $\sqrt[4]{2x^2} \cdot \sqrt[4]{2x^3}$.

- A. $2^{\frac{1}{2}}x^{\frac{6}{2}}$
- B. $2^{\frac{2}{4}}x^{\frac{5}{4}}$
- C. $4^{\frac{1}{3}}x^{\frac{5}{2}}$
- D. $4^{\frac{4}{2}}x^{\frac{1}{4}}$

⑥ **Example Stem:** Enter the value of x such that $\frac{16^{\frac{5}{4}}}{16^{\frac{1}{x}}} = \sqrt[3]{16^3}$ is true.

7 **Example Stem 2:** Select an expression that is equivalent to $\left(\frac{1}{3}\right)x^{\frac{2}{3}}$.

$\left(\frac{1}{3}\right)x^{\frac{2}{3}}$.

- A. $\sqrt[12]{3x^2}$
- B. $\sqrt[6]{\left(\frac{1}{3}\right)x^4}$
- C. $\frac{1}{9}\sqrt[12]{x^{11}}$
- D. $\frac{1}{3}\sqrt[12]{x^2}$

8 **Example Stem:** Select an expression that is equivalent to $8^{\frac{1}{3}}(\sqrt[3]{8^2} + 8^2)$.

- A. $\sqrt{8^9} + 8^{\frac{3}{7}}$
- B. $\sqrt[3]{8^3} + 8^{\frac{7}{3}}$
- C. $\sqrt[7]{8^3} + 8^{\frac{3}{2}}$
- D. $\sqrt[9]{8^2} + 8^{\frac{7}{3}}$

9 **Example Stem 2:** Which of the following is a solution to the equation $x^3 = \frac{1}{49}$?

- A. $x = 7^{\frac{2}{3}}$
- B. $x = 7^{\frac{3}{2}}$
- C. $x = 7^{\frac{2}{3}}$
- D. $x = 7^{-\frac{3}{2}}$
- E. This equation has no solution.

10 **Example Stem:** Which of the following is a solution to the equation $x^5 = \sqrt[3]{4}$?

- A. $x = (\sqrt[3]{4})^5$
- B. $x = \sqrt[15]{4}$
- C. $x = \sqrt[3]{20}$
- D. $x = \frac{\sqrt[3]{4}}{5}$
- E. This equation has no solution.

11 **Example Stem:** Select **all** the statements about the number $9^{0.4}$ that are true.

- A. $9^{0.4}$ is greater than 3.
- B. $9^{0.4}$ is equal to 3.6.
- C. $9^{0.4}$ raised to the fifth power equals 81.
- D. $9^{0.4}$ multiplied by 10 equals 9^4 .
- E. $9^{0.4}$ is less than $3^{0.9}$.

12) **Example Stem:** Select the appropriate box to identify each expression as having either a rational or irrational sum.

	Rational	Irrational
$5\sqrt{7} + \frac{1}{7}$		
$\sqrt{4} + 17$		
$12.4 + (-11)$		
$-\frac{4}{5} + (-10\sqrt{10})$		

13) **Example Stem 1:** Click on **two** numbers whose sum, when added, would be **irrational**.

Numbers	-5	$3\sqrt{2}$	$\frac{2}{3}$	$\frac{1}{3}$	$\sqrt{8}$
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14) **Example Stem 2:** Click on **two** numbers whose sum, when added, would be **rational**.

Numbers	-5	$3\sqrt{2}$	$\frac{2}{3}$	$\frac{1}{3}$	$\sqrt{7}$
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15) **Example Stem 3:** Click on **two** numbers whose product, when multiplied, would be **irrational**.

Numbers	-5	$3\sqrt{2}$	$\frac{2}{3}$	$\frac{1}{3}$	$\sqrt{8}$
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16) **Example Stem:** Select each box in the table where the numbers from corresponding rows and columns will have a rational product.

	4	$\frac{1}{3}$	$\sqrt{3}$	$-\sqrt{3}$
4				
$\frac{1}{3}$				
$\sqrt{3}$				
$-\sqrt{3}$				

17 **Example Stem:** Select the expression that is equivalent to $(x + 4)^2 - (x - 2)(x + 4)$.

- A. $4(x + 4)$
- B. $2(x + 1)(x + 4)$
- C. $(x + 4) - (x - 2)$
- D. $(x + 4)[(x + 4) - (x - 2)]$

18 **Example Stem 2:** Determine whether each expression is equivalent to $(8x^3 - 64)$. Select Yes or No for each expression.

	Yes	No
$(2x - 4)^3$		
$8(x - 8)^3$		
$8(x - 2)(x^2 + 2x + 4)$		
$(2x - 4)(4x^2 + 8x + 16)$		

19 **Example Stem 2:** Determine if each equation is true for all values of x . Select Yes or No for each equation.

	Yes	No
$2^{3x} = 6^x$		
$100^x = 10^{2x}$		
$e^x \cdot e^x = e^{2x}$		
$2^{10x} = 10^{2x}$		

20 **Example Stem 1:** Drag a number into each box to create an equation that is true for all values of x .

$$2(4x + 3)(3x + 5) = \square x^2 + 58x + \square$$

Palette Choices: 6 8 12 15 24 29 30 58

21 **Example Stem 2:** Drag one or more expressions into each box to create an equation that is true for all values of x . (Assume no denominator equals zero.)

$$\frac{3}{x+2} + \frac{4}{x} + \frac{2}{x^2} = \frac{3\square + 4\square + 2\square}{\square}$$

Preset Choices:

x x^2 $(x + 2)$ $x(x + 2)$ $x^2(x + 2)$

22 **Part B:** Select all values of x for which $f(x) = 0$.

Part A:

$$f(x) = -2x^2 + 24x - 54$$
$$f(x) = -2(x - 3)(x - 9)$$
$$f(x) = -2(x - 6)^2 + 18$$

Part B:

-54	-18	-9	-6	-3	
0	3	6	9	18	54

23 **Example Stem:** Which equation includes the minimum or maximum value of f as a number that appears in the equation?

- A. $f(x) = (x - 1)^2 - 4$
- B. $f(x) = x^2 - 2x - 3$
- C. $f(x) = x^2 - 3x + x - 3$
- D. $f(x) = (x + 1)(x - 3)$

24 **Example Stem 2:** Enter the function $f(x) = 28x^2 + 16x - 80$, in the form $f(x) = a(x - h)^2 + k$, where a , h , and k are constants.

25 **Example Stem 1:** Enter an expression equivalent to $\left(\frac{a^9}{a^3}\right)$ in the form a^m .

26 **Example Stem 2:** Enter an expression equivalent to a^{20} in the form $(a^n)^m$.

27 **Example Stem 3:** Enter an expression equivalent to a^{-12} in the form $(a^n)^m$.

28 **Example Stem 4:** Enter an expression equivalent to $(a^2a^4b)^5$ in the form a^mb^n .

29 **Example Stem:** Which expression is equivalent to $(mx + 5) + (2x - b)$?

- A. $2mx - 5b$
- B. $(2 + m)x - b + 5$
- C. $2mx - 5 + b$
- D. $2mx - bmx + 10x - 5b$

30 **Example Stem 2:** Which expression is equivalent to $(ax + b) \cdot (cx + d)$?

- A. $acx^2 + bd$
- B. $(a + c)x + (b + d)$
- C. $(a + c)x^2 + (b + d)$
- D. $acx^2 + (ad + bc)x + bd$

31 **Example Stem 3:** A sales clerk's daily earnings include \$125 per day plus commission equal to x percent of his daily sales.

Enter an equation that can be used to find the commission percentage (x), if the clerk's daily sales are \$1375 and his total earnings for that day are \$180.

32 **Example Stem 1:** A clerk earns \$125 per day, plus a commission equal to 10% of her sales, s . The clerk earns less than \$180 on Monday.

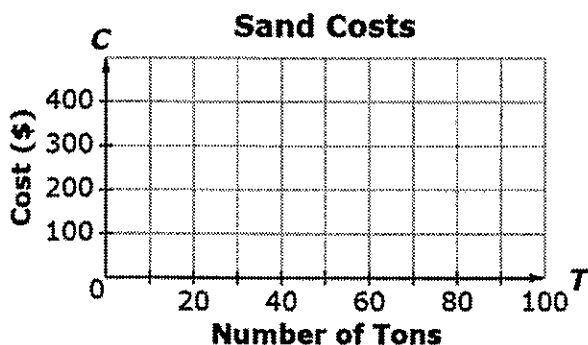
Enter an inequality that represents all possible values for the clerk's sales, s , on Monday.

33 **Example Stem 2:** A rectangular garden measuring 13 meters by 15 meters is to have a gravel pathway of constant width built all around it. There is enough gravel to cover 80 square meters or less.

Enter an inequality that represents all possible widths (w), in meters, of the pathway.

34 **Example Stem:** An elementary school is having sand delivered for the playground. Sadie's Sand charges \$5.00 per ton of sand plus a delivery fee of \$200. Greg's Sand Pit charges \$12.00 per ton of sand plus a delivery fee of \$50.

Use the Add Arrow tool to represent functions that show the cost C of buying T tons of sand from each company.



6

35 **Example Stem:** Malik and Nora are playing a video game.

- Malik starts with m points and Nora starts n points.
- Then Malik gets 150 more points, while Nora loses 50 points.
- Finally, Nora gets a bonus and her score is doubled.
- Nora now has 50 more points than Malik.

Enter an equation that represents the relationship between m and n given the information above.

36 **Example Stem 2 (DOK 2):** Enter the value of t that makes the equation true.

$$\frac{1}{t-4} = \frac{3}{t}$$

37 **Example Stem 2 (DOK 2):** Enter the value(s) of n that make the equation true.

$$n - 1 = \sqrt{5n - 9}$$

38 **Example Stem 3:** Select whether each equation has no real solution, one real solution, two real solutions, or infinitely many real solutions.

	No Real Solution	One Real Solution	Two Real Solutions	Infinitely Many Real Solutions
$\sqrt{n} + 2 = 0$				
$\frac{4n}{12} = \frac{3n}{9}$				
$\frac{3}{n} = \frac{2}{n+1}$				
$\sqrt{n^2 - 5} = 2$				

39 **Example Stem 1:** A student was finding the solutions to the equation $1 + \sqrt{x-3} = 0$ and wrote the four steps shown.

Step 1: $\sqrt{x-3} = -1$

Step 2: $(\sqrt{x-3})^2 = (-1)^2$

Step 3: $x - 3 = 1$

Step 4: $x = 4$

Which statement is an accurate interpretation of the student's work?

- The student made an error in Step 1.
- The student made an error in Step 3.
- The student found the correct solution to the original equation, $x = 4$.
- $x=4$ is a solution to the equation in Step 2, but not to the original equation.

40 **Example Stem:** Equivalent equations have exactly the same solution set. Select Yes or No to indicate whether each equation is equivalent to the given equation.

Given: $\sqrt{t+1} + 5 = 0$

Equation	Yes	No
$\sqrt{t+1} = -5$		
$t + 1 = 25$		
$t = 24$		

41 **Example Stem 2:** Enter the value for x that makes the given equation true.

$$20x - 5(6x + 4) = 4x - 6$$

42 **Example Stem 2:** Solve the inequality for w .

$$-2w + 17 < 13.$$

43 **Example Stem 1:** Solve the given equation for a in terms of v and t .

$$v = \frac{1}{2}at^2$$

44 **Example Stem 3:** Solve the following equation for x .

$$x^2 - 10x + 45 = 4x$$

45 **Example Stem 4:** Solve the following equation for w .

$$2w^2 - 16w = -32$$

46 **Example Stem 1:** Consider the equation $x^2 + bx + 9 = 0$ where b is a real number. Enter a value for b so that the equation has no real solutions.

47 **Example Stem 2:** Consider the equation $(x + 3)^2 + k = 0$ where k is a real number. Enter a value for k so that the equation has no real solutions.

48 **Example Stem:** What are the solutions for the given equation?

$$x^2 + 4x + 16 = 0$$

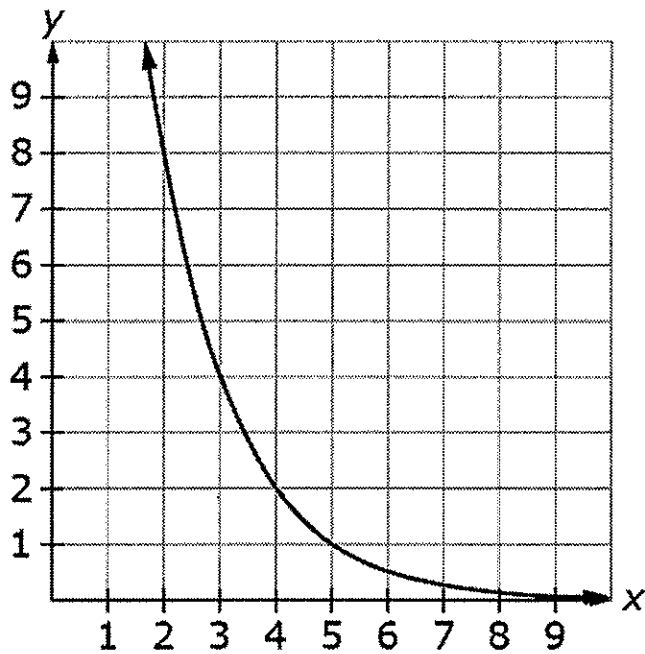
- A. $x = -2 \pm 4i\sqrt{3}$
- B. $x = -2 \pm 2\sqrt{3}$
- C. $x = -2 \pm 2i\sqrt{3}$
- D. $x = -2 \pm 4\sqrt{3}$

49 **Example Stem 3:** Equivalent equations have exactly the same solution set. Select Yes or No to indicate whether each of the following equations is equivalent to the given equation.

$$y^2 + 2y + 1 = 9$$

Equation	Yes	No
$(y + 1)^2 = 3^2$		
$(y + 1) = 3$		
$y = 2$		

50 **Example Stem 1:** This graph represents the equation $y = 0.5^{(x-5)}$.

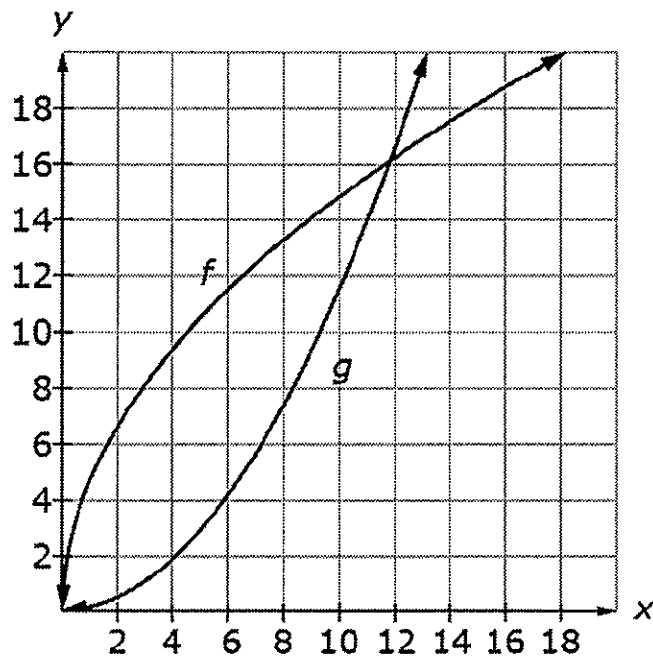


How many ordered pairs (x, y) for $1 < x < 9$ satisfy this equation?

- A. No ordered pairs
- B. Exactly one ordered pair
- C. Exactly two ordered pairs
- D. An infinite number of ordered pairs

51 **Example Stem 2:** The graphs of the functions f and g are shown, where:

- $f(x) = 4.5\sqrt{x}$
- $g(x) = \left(\frac{1}{9}\right)x^2$



Select the **two** closest approximations for solutions to the equation $f(x) - g(x) = 0$.

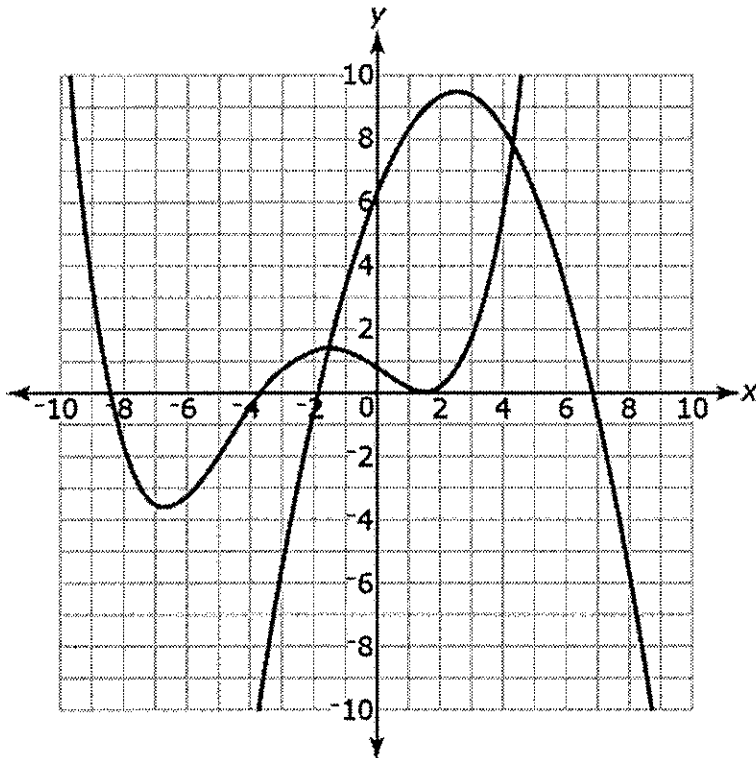
- A. $x = 0$
- B. $x = 5.0$
- C. $x = 11.7$
- D. $x = 13.5$
- E. $x = 20.0$

52 **Example Stem:** Billy buys light bulbs in packs of 8 for \$20. The shipping cost is \$10 regardless of the number of packs bought. Billy has only \$120 to spend.

If n is the number of packs of lightbulbs bought, then the cost per lightbulb, C , can be modeled as a function of n . Select the statement that correctly describes the domain of the function.

- A. The domain is the set of all **real numbers** $1 \leq n \leq 6$.
- B. The domain is the set of all **real numbers** $1 \leq n \leq 5$.
- C. The domain is the set of all **integers** $1 \leq n \leq 6$.
- D. The domain is the set of all **integers** $1 \leq n \leq 5$.

53 **Example Stem:** The graphs of two polynomial functions f and g of degree 2 and degree 4 are shown.



How many solutions are there to the equation $f(x) = g(x)$?
Enter your answer in the first response box.

Enter **one** of the solutions to the equation $f(x) = g(x)$ to the nearest 0.5 in the second response box.

54 **Example Stem 3:** Given the function $y = \frac{1}{2}|2x - 1| + 2$,

- Use the Add Arrow tool to create a graph that represents the function.

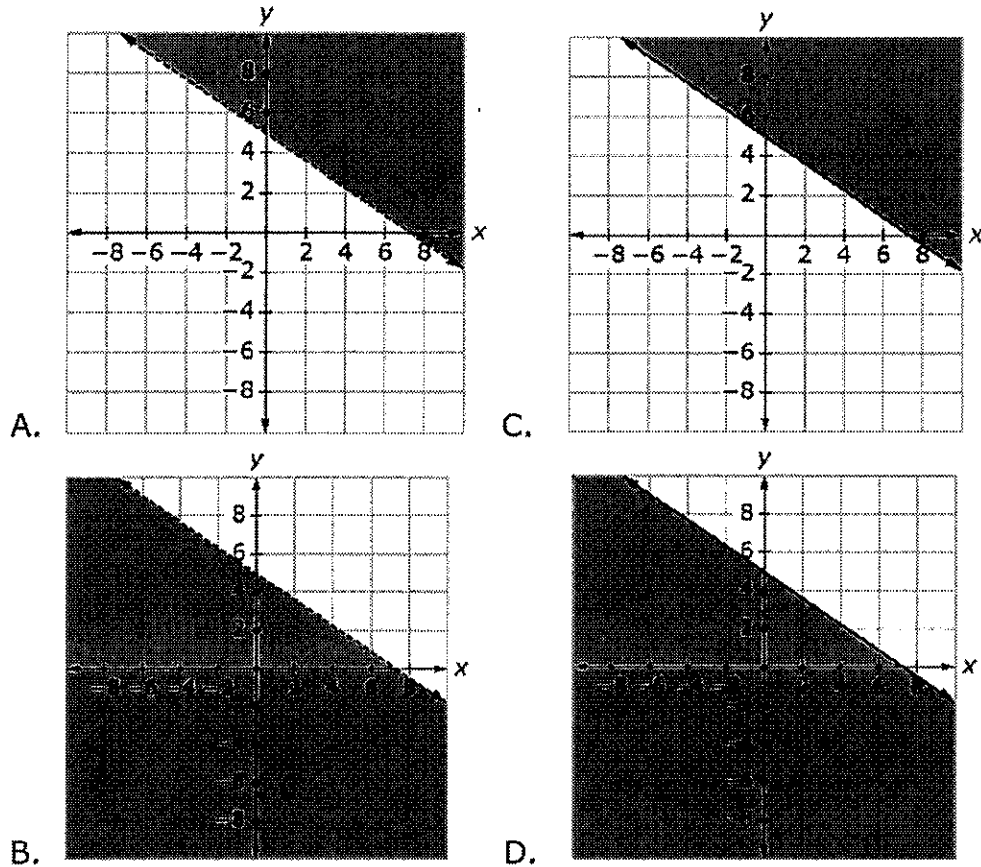
55 **Example Stem:** During the first years of growth the height of a tree can be modeled with the function

$$h = -t^2 + 12t + 10,$$

where t is the time in years since being planted and h is the height in inches.

Enter the average rate of change, in inches per year, from year 1 to year 5.

56 **Example Stem:** Select the graph that shows the solution set of the linear inequality, $y > -\frac{2}{3}x + 5$.



57 **Example Stem:** The height in meters, h , of a model rocket above the ground is given t seconds after launch by the equation

$$h = -5t^2 + 40t$$

Given this information, indicate whether each statement is true or false.

	True	False
The height of the rocket is a function of time.		
The time since launch is a function of the height.		

58 **Example Stem:** Consider a sequence whose first five terms are 6, 12, 24, 48, 96.

Select the function, with domain $n = \{1, 2, 3, 4, 5\}$, that defines this sequence.

- A. $f(n) = 6n$
- B. $f(n) = 6(n - 1)$
- C. $f(n) = 6n^2$
- D. $f(n) = 6(2)^{n-1}$

Example Stem:

59

Part A:

Graph the lines representing the boundaries of the system of linear inequalities.

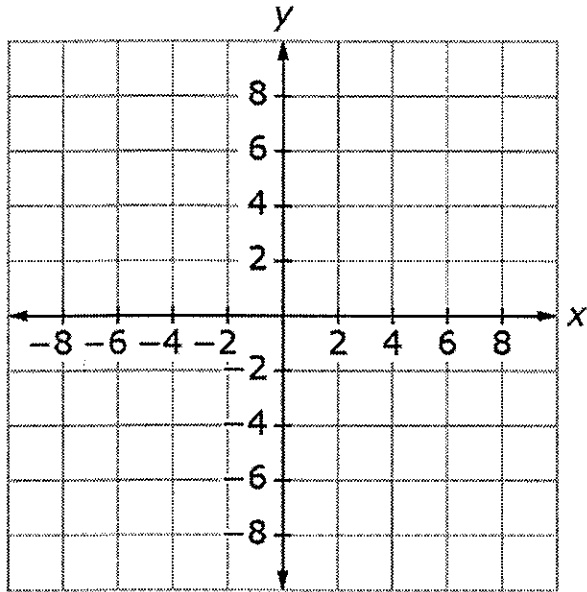
$$3x + 2y \leq 6$$

$$4x - y \leq 8$$

60

Part B:

Plot a point within the solution set that is not on either boundary line.

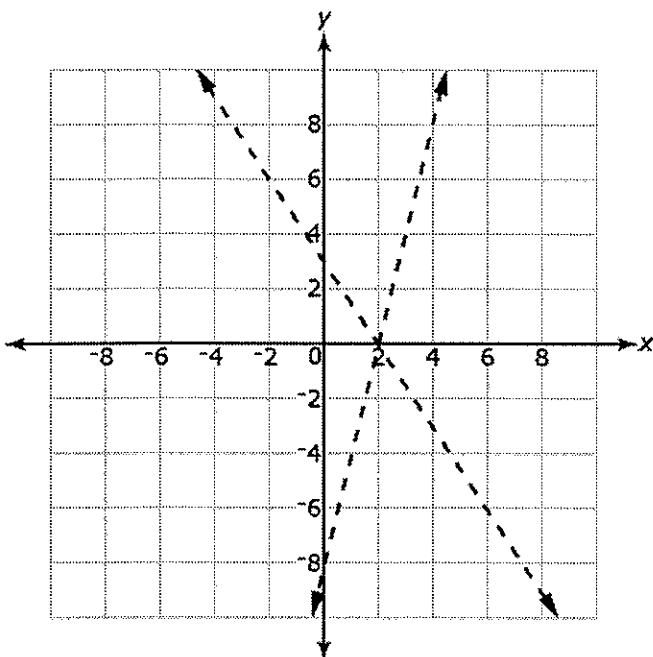


61

Example Stem: Click on the region of the plane that contains the solution set of the system of linear inequalities.

$$3x + 2y < 6$$

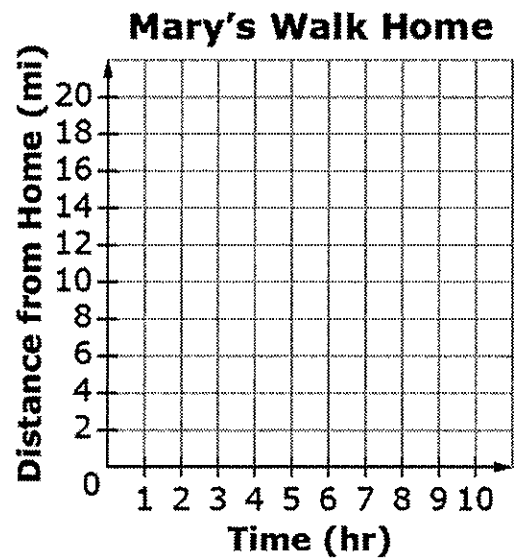
$$4x - y < 8$$



62

Example Stem 1: Mary is 10 miles from her home.

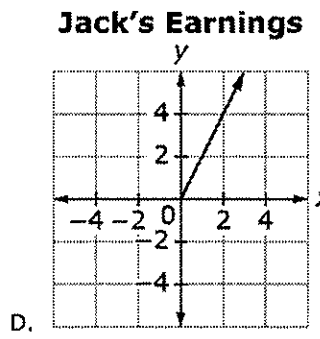
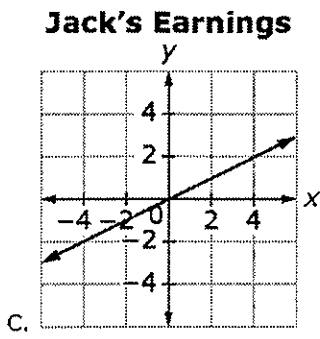
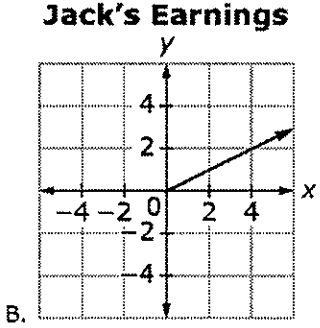
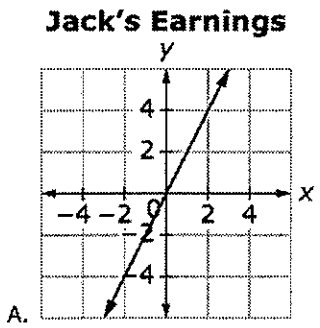
- She is returning home, walking at a constant speed of 2 miles per hour.
- Her distance from home can be modeled as a function of time.



Use the Add Point and Connect Line tools to graph Mary's distance from home as a function of time.

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Example Stem: Select the graph that correctly represents the amount of money, y , Jack earns doing chores for x hours at \$2 per hour.



64

Example Stem:

Enter an equation for the line of symmetry for the function defined by $f(x) = -8x^2 + 16x + 2$.

65

Example Stem 1: Given the function $y = -x^2 + x + 6$,

- Place a point on the coordinate grid to show each x-intercept of the function.
- Place a point on the coordinate grid to show the maximum value of the function.

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Example Stem 2: Given the function $y = \sqrt{x+4} - 1$,

- Place a point on the coordinate grid to show each x-intercept of the function
- Place a point on the coordinate grid to show the y-intercept of the function.

67

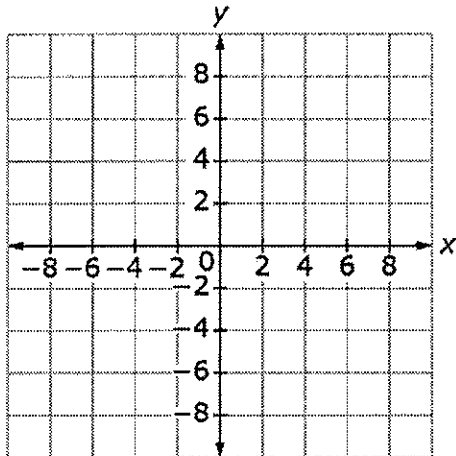
Example Stem 3: Given the function $y = \sqrt[3]{x-1} + 2$,

- Place a point on the coordinate grid to show the x-intercept of the function.
- Place a point on the coordinate grid to show the y-intercept of the function.

68

Example Stem 7: Given the function $y = 8\log(x+4)$,

- Place a point on the coordinate grid to show the x-intercept of the function.
- Place a point on the coordinate grid to show the y-intercept of the function.

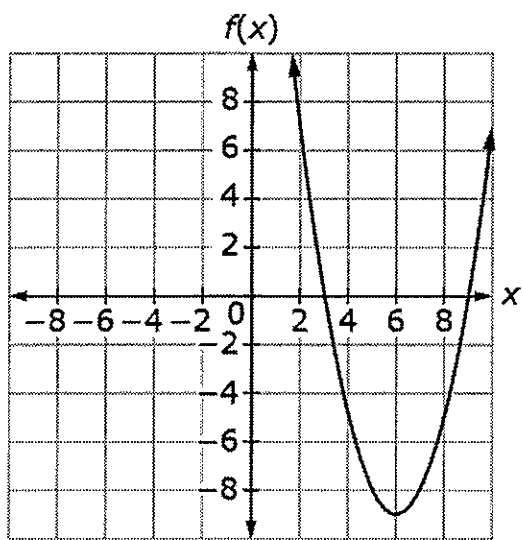


69

Example Stem: Determine whether each function represents exponential growth or decay. Select the correct option for each function.

Function	Growth	Decay
$f(x) = \left(\frac{1}{2}\right)^x$		
$f(x) = \left(\frac{3}{2}\right)^{4x}$		
$f(x) = \left(\frac{7}{8}\right)^{4x}$		
$f(x) = \left(\frac{4}{3}\right)^{\frac{x}{12}}$		
$f(x) = 3\left(\frac{1}{3}\right)^{\frac{x}{12}}$		

70 **Example Stem:** Determine whether each equation in the table represents the graph of the function shown. Select Yes or No for each equation.



Function	Yes	No
$f(x) = (x - 3)(x - 9)$		
$f(x) = (x + 3)(x - 9)$		
$f(x) = (x + 6)(x - 9)$		
$f(x) = (x - 3)^2 - 18$		
$f(x) = (x - 6)^2 - 9$		

71 **Example Stem 1:** The first row in a theater has 8 seats, the second row has 11 seats, the third row has 14 seats and the fourth row has 17 seats. The pattern of increasing each successive row by 3 seats continues throughout the theater.

- $f(r)$ = the number of seats in row r .
- $f(1) = 8$

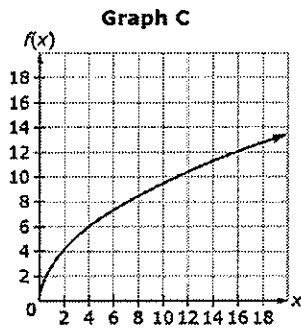
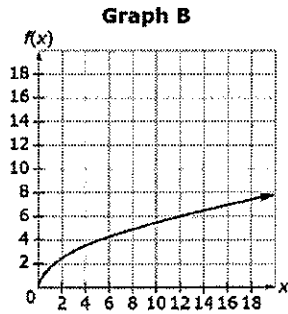
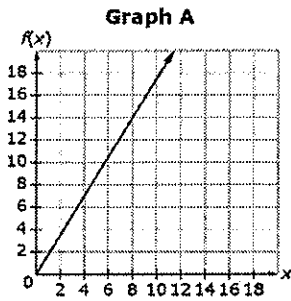
Enter an equation, for $r \geq 2$, which describes the number of seats, $f(r)$, in the r th row in terms of the number of seats in the $(r - 1)$ th row, $f(r - 1)$.

72 **Example Stem:** The functions in the table are defined for integers $n \geq 1$. Match each recursively defined function with the equivalent explicit form.

Functions	$f(n) = 3(10)^{n-1}; n \geq 1$	$f(n) = 3n + 7; n \geq 1$	$f(n) = 10(3)^{n-1}; n \geq 1$
$f(1) = 10$ $f(n) = 3f(n - 1); n \geq 2$			
$f(1) = 3$ $f(n) = 10f(n - 1); n \geq 2$			
$f(1) = 10$ $f(n) = f(n - 1) + 3; n \geq 2$			

73

Example Stem 1: Select the appropriate box to indicate the match of each graph to its equation.



Equation	Graph A	Graph B	Graph C
$f(x) = x\sqrt{3}$			
$f(x) = 3\sqrt{x}$			
$f(x) = \sqrt{3x}$			

74

Example Stem 1: Consider this function in explicit form.

$$f(n) = 3n - 4; n \geq 1$$

Select the equivalent recursively defined function.

- A. $f(1) = -1$
 $f(n) = f(n - 1) + 3; n \geq 2$
- B. $f(1) = -1$
 $f(n) = 3f(n - 1); n \geq 2$
- C. $f(0) = -4$
 $f(n) = 3f(n - 1); n \geq 2$
- D. $f(0) = -4$
 $f(n) = f(n - 1) + 3; n \geq 2$

75 **Example Stem 1:** Maria is making a rectangular garden. The length of the garden is 2 yards greater than its width, w , in yards.

Enter the function, $f(w)$, that describes the area, in square yards, of Maria's garden as a function of the width, w .

76 **Example Stem 2:** Barb traveled 300 miles during the first 5 hours of her trip. Barb then traveled at a constant speed of 50 miles per hour for the remainder of the trip.

Enter the function, $f(t)$, that describes the average speed during the entire trip as a function of time, t , in hours, Barb traveled after her first 300 miles.

77 **Example Stem 3:** A washing machine was purchased for \$256. Each year the value is $\frac{1}{4}$ of its value the previous year.

Enter the function, $f(t)$, that describes the value of the washing machine, in dollars, as a function of time in years, t , after the initial purchase.

78 **Example Stem 2:** Consider this function in recursive form.

$$f(1) = -3$$
$$f(n) = 3f(n - 1); n \geq 2$$

Select the equivalent explicit function for $n \geq 1$.

- A. $f(n) = -3(n)$
- B. $f(n) = -3(n - 1)$
- C. $f(n) = -3(3)^n$
- D. $f(n) = -3(3)^{(n-1)}$

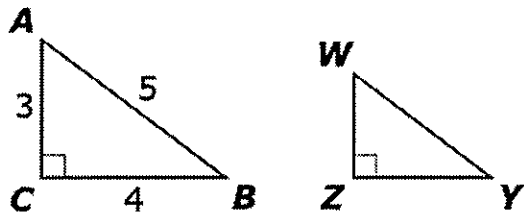
79 **Example Stem:** A theater needs to place seats in rows. The function, $f(r)$, as shown below, can be used to determine the number of seats in each row, where r is the row number.

$$f(1) = 8$$
$$f(r) = f(r - 1) + 3$$

Use the function to complete the table indicating the number of seats in each of the first four rows of the theater.

Row number	Number of Seats
Row 1	
Row 2	
Row 3	
Row 4	

81) **Example Stem:** Triangle ABC is similar to triangle WYZ.



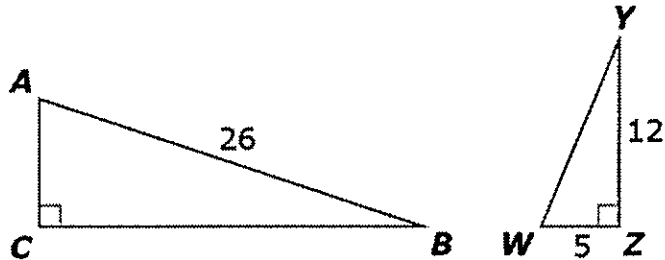
Select all angles whose tangent equals $\frac{3}{4}$.

- A) $\angle A$
- B) $\angle B$
- C) $\angle C$
- D) $\angle W$
- E) $\angle Y$
- F) $\angle Z$

81) **Example Stem 1:** Let $\sin(47^\circ) = 0.7314$. Enter an angle measure (β), in degrees, where $\cos(\beta) = 0.7314$.

82) **Example Stem 2:** Let $\sin(30^\circ) = \frac{1}{2}$. Enter the angle measure (β), in degrees, for $\cos(\beta) = \frac{1}{2}$.

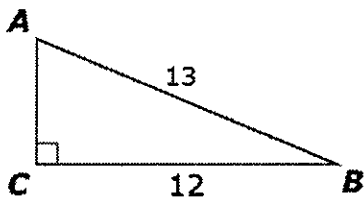
83) **Example Stem:** Triangle ABC is similar to triangle WYZ.



Determine whether each statement is true. Select True or False for each statement.

	True	False
$\sin(A) < \sin(Y)$		
$\cos(B) = \sin(W)$		
$\tan(W) > \tan(A)$		

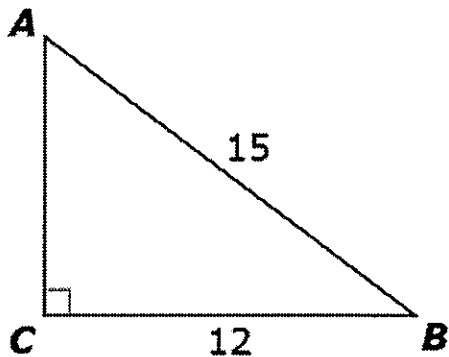
84) **Example Stem:** Consider this right triangle.



Determine whether each expression can be used to find the length of \overline{AC} .
Select Yes or No for each expression.

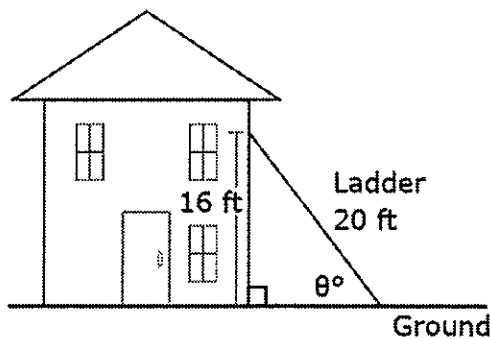
	Yes	No
$13\sin(B)$		
$13\cos(A)$		
$12\tan(A)$		
$12\tan(B)$		

85) **Example Stem:** Consider this right triangle.



Enter the measure of $\angle A$, to the nearest degree.

86) **Example Stem:** Bob uses a 20 foot ladder to paint a section of his house that is 16 feet high.



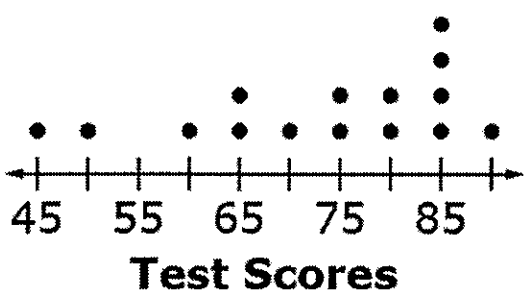
Select **all** equations that can be used to solve for θ .

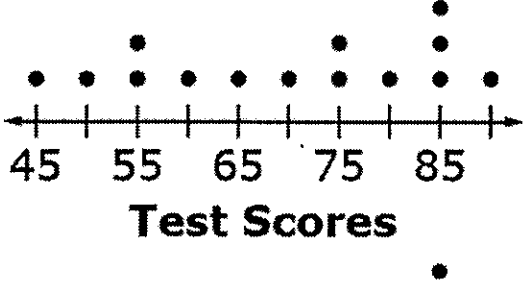
- A. $\sin \theta = \frac{12}{20}$
- B. $\cos \theta = \frac{12}{20}$
- C. $\tan \theta = \frac{12}{20}$
- D. $\sin \theta = \frac{16}{20}$
- E. $\cos \theta = \frac{16}{20}$
- F. $\tan \theta = \frac{16}{20}$

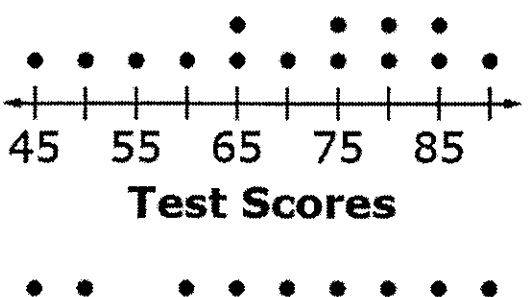
87

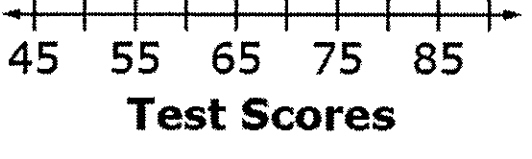
Example Stem 1: Select the dot plot that represents the given test scores.

90, 45, 85, 70, 85, 50, 75, 85, 65, 75, 60, 85, 80, 65, 80

- A. 

Test Scores
- B. 

Test Scores
- C. 

Test Scores
- D. 

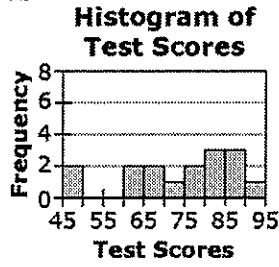
Test Scores

88

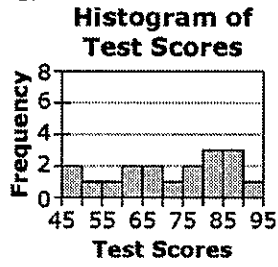
Example Stem 2: Select the histogram that represents the given test scores.

91, 48, 86, 73, 86, 49, 77, 86, 64, 78, 64, 82, 68, 82, 68, 82

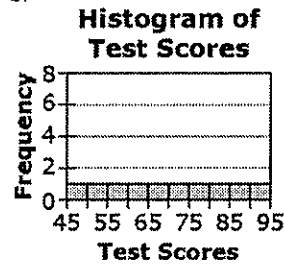
A.



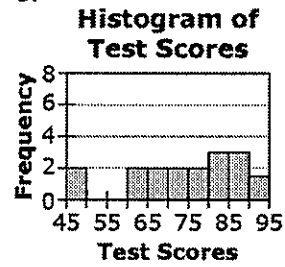
B.



C.



D.

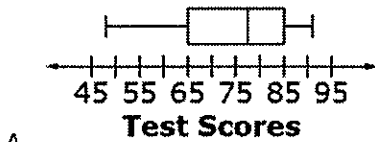


Rubric: (1 point) The student selects the correct option (e.g., A).

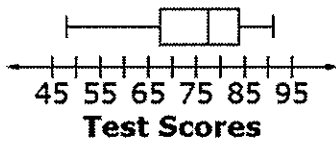
89

Example Stem 3: Select the box plot that represents the given test scores.

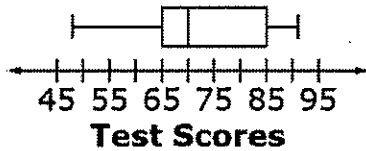
48, 50, 64, 64, 68, 68, 73, 77, 78, 82, 82, 82, 86, 86, 86, 91



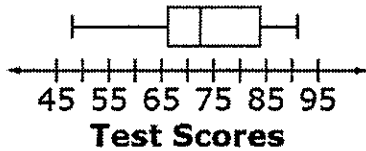
A.



B.



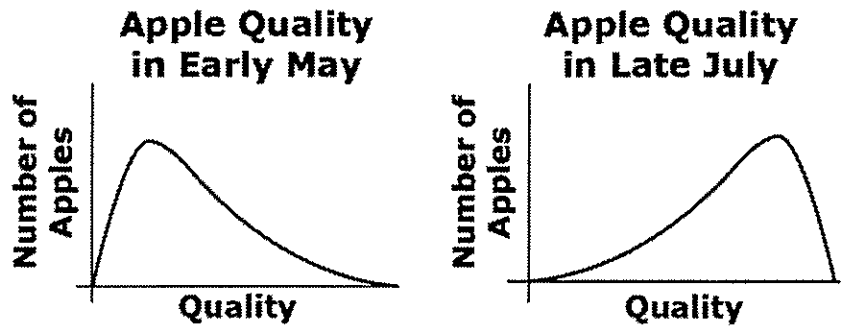
C.



D.

90

Example Stem: Data distributions are shown for the taste quality of a farm's red apples at different points in time during the harvest season.



Which summary statistics would be best to use to compare the two data sets and why?

- A. The median and the interquartile range because the data sets are normally distributed.
- B. The median and the interquartile range because both data sets are skewed.
- C. The mean and standard deviation because the data sets are normally distributed.
- D. The mean and standard deviation because both data sets are skewed.

91

Example Stem: A car dealership has 41 cars for sale. The least expensive car costs \$11,999. The most expensive car costs \$19,499. Another car, priced at \$33,499, is added to the dealership's inventory. Select whether the value of each statistic, for the prices of the cars, increases, decreases, or cannot be determined when the new car is added.

	Increases	Decreases	Cannot Be Determined
Mean			
Median			
Standard Deviation			