



SAT[®] June 2018 US

IMPORTANT REMINDERS

1

A No. 2 pencil is required for the test.
Do not use a mechanical pencil or pen.

2

Sharing any questions with anyone
is a violation of Test Security
and Fairness policies and may result
in your scores being canceled.



Math Test – No Calculator

25 MINUTES, 20 QUESTIONS

Turn to Section 3 of your answer sheet to answer the questions in this section.

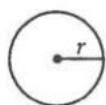
DIRECTIONS

For questions 1-15, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. For questions 16-20, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 16 on how to enter your answers in the grid. You may

NOTES

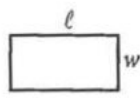
- The use of a calculator is **not permitted**.
- All variables and expressions used represent real numbers unless otherwise indicated.
- All figures lie in a plane unless otherwise indicated.
- Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE

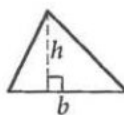


$$A = \pi r^2$$

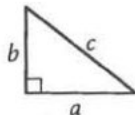
$$C = 2\pi r$$



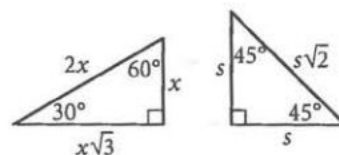
$$A = \ell w$$



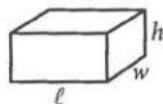
$$A = \frac{1}{2}bh$$



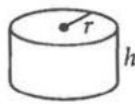
$$c^2 = a^2 + b^2$$



Special Right Triangles



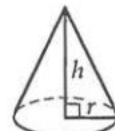
$$V = \ell wh$$



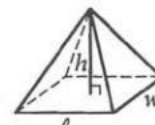
$$V = \pi r^2 h$$



$$V = \frac{4}{3}\pi r^3$$



$$V = \frac{1}{3}\pi r^2 h$$



$$V = \frac{1}{3}\ell wh$$

The number of degrees of arc in a circle is 360.

The number of radians of arc in a circle is 2π and

The sum of the measures in degrees of the angles of a triangle is 180.



1

$$2x + 7 = 15$$

What is the solution to the equation above?

- A) 3
- B) 4
- C) 6
- D) 11

2

During a game of basketball, Jenna scored a total of 16 points. She earned either 2 points or 3 points each time she scored a basket. If a represents the number of 2-point baskets she made and b represents the number of 3-point baskets she made, which of the following equations best represents the relationship between a and b ?

- A) $2a + 3b = 16$
- B) $3a + 2b = 16$
- C) $a + b = 2 + 3$
- D) $a + b = 16$

3

If $ax + 3 = 4x + 3$ for all values of x , where a is a constant, what is the value of a ?

- A) 0
- B) 3
- C) 4
- D) 7

4

$$f(x) = x - 1$$

For the function f defined by the equation shown, which of the following is the value of $f(6)$?

- A) -6
- B) -5
- C) 5
- D) 7

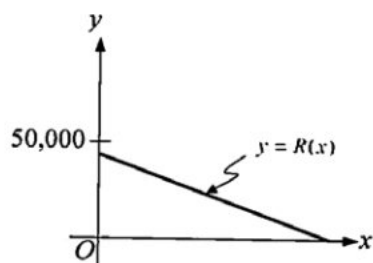


5

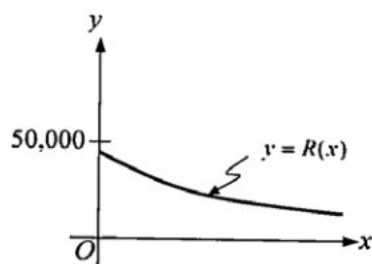
$$R(x) = 45,000(1.02)^x$$

A marketer predicts that the revenue $R(x)$, in dollars, for a product can be modeled by the function defined above, x months after the product's release. Which of the following could represent the graph of the function R in the xy -plane?

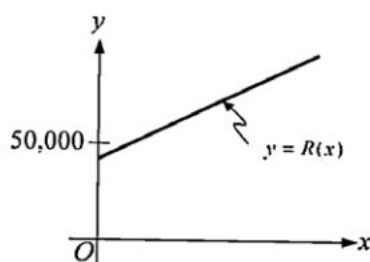
A)



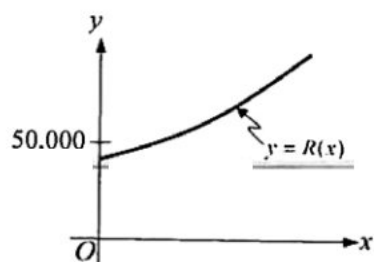
B)



C)

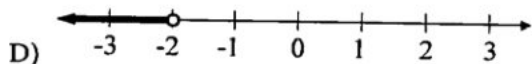
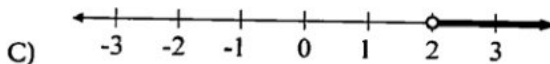
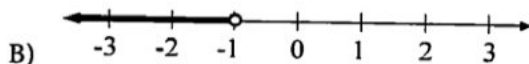
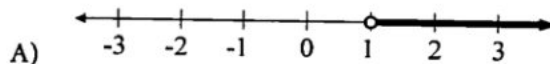


D)



6

Which of the following number lines represent solution set of $2x - 1 > 3$?





7

A company designs different sizes of models of the Parthenon, an ancient temple in Athens, Greece.

Each model has a rectangular base. For all sizes of the models, the length of the base is $\frac{9}{4}$ the base's width. If

the width of the base of a model is w centimeters, which of the following functions could represent the area $A(w)$, in square centimeters, of the base of the model?

- A) $A(w) = \frac{4}{9}w^2$
- B) $A(w) = \frac{9}{4}w^2$
- C) $A(w) = \frac{4}{9}w^2 + w$
- D) $A(w) = \frac{9}{4}w^2 + w$

8

x	$f(x)$
-73	184
0	-35
27	-116

Some values of the linear function f are given in the table above. Which of the following equations defines f ?

- A) $f(x) = 3x - 35$
- B) $f(x) = \frac{1}{3}x - 35$
- C) $f(x) = -\frac{1}{3}x - 35$
- D) $f(x) = -3x - 35$

9

Which of the following is equivalent to $(2x-1)(x^3+x^2-x+1)$?

- A) $2x^4 + x^3 - 3x^2 - x + 1$
- B) $2x^4 + x^3 - 3x^2 + 3x - 1$
- C) $2x^4 + x^3 - x^2 + x - 1$
- ~~D) $2x^4 + 3x^3 - x^2 - 3x - 1$~~



10

The kinetic energy, in joules, of an object with mass 5 kilograms traveling at a speed of v meters per second (m/s) is given by the function K , where

$$K(v) = \frac{5}{2}v^2. \text{ Which of the following is the best}$$

interpretation of $K(10) = 250$ in this context?

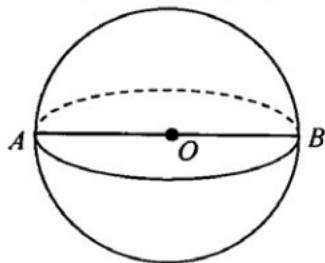
- A) The object traveling at 10 m/s has a kinetic energy of 250 joules.
- B) The object traveling at 100 m/s has a kinetic energy of 250 joules.
- C) The object traveling at 250 m/s has a kinetic energy of 10 joules.
- D) The object traveling at 625 m/s has a kinetic energy of 10 joules.

11

Which of the following is equivalent to $\frac{x-2}{3x-6}$, where $x \neq 2$?

- A) 0
- B) $\frac{1}{3}$
- C) $\frac{2}{3}$
- D) $\frac{7}{12}$

12



The sphere shown has center O and diameter \overline{AB} . The length \overline{AB} of is 6. What is the volume of the sphere?

- A) 12π
- B) 27π
- C) 36π
- D) 288π

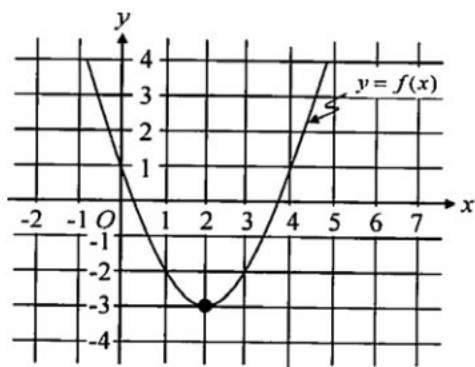
13

In triangle ABC , point D is the midpoint of segment AB and point E is the midpoint of segment BC . If $DB = 6$ and $DE = 11$ what is the length of segment AC ?

- A) 12
- B) 17
- C) 20
- D) 22



14

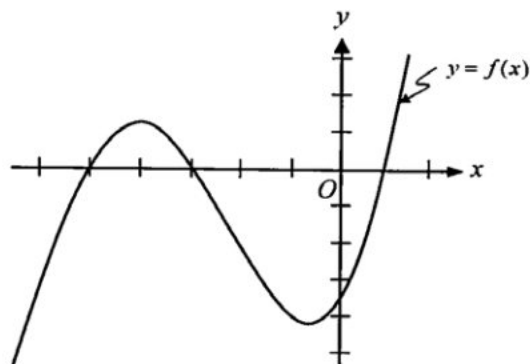


The graph of the quadratic function f is shown in the xy -plane above. Which of the following is (are) true?

- I. $f(0) = f(1)$
- II. $f(0) = f(4)$

- A) I only
- B) II only
- C) I and II
- D) Neither I nor II

15



The graph of the function f is shown in the xy -plane above. Which of the following could define f ?

- A) $f(x) = \frac{1}{4}(x+5)(x+3)(x-1)$
- B) $f(x) = -\frac{1}{4}(x+5)(x+3)(x-1)$
- C) $f(x) = \frac{1}{4}(x-5)(x-3)(x+1)$
- D) $f(x) = -\frac{1}{4}(x-5)(x-3)(x+1)$



DIRECTIONS

For questions 16-20, solve the problem and enter your answer in the grid, as described below, on the answer sheet.

- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately. You will receive credit only if the circles are filled in correctly.
- Mark no more than one circle in any column.
- No question has a negative answer.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If

3	1	/	2
○	○	○	○

 is entered into the grid, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)
- Decimal answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid.

Answer: $\frac{7}{12}$

7	/	1	2
○	○	○	○
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Write answer in boxes. →

← Fraction line

Grid in result.

Answer: 2.5

2	.	5
○	○	○
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

← Decimal point

Acceptable ways to grid $\frac{2}{3}$ are:

2	/	3
○	○	○
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7

.	6	6	6
○	○	○	○
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7

.	6	6	7
○	○	○	○
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7

Answer: 201 – either position is correct

2	0	1
○	○	○
0	0	0
1	1	1
2	2	2
3	3	3

2	0	1
○	○	○
0	0	0
1	1	1
2	2	2
3	3	3

NOTE: You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.



16

$$y = x(x - 2)$$
$$y = x - 2$$

If (x, y) is a solution to the given system of equations, what is a possible value of x ?

17

At a market, apples cost \$1.00 per pound and carrots cost \$0.80 per pound. The total cost of apples and carrots Sally purchased from the market was \$4.90. If she purchased 3 pounds of carrots, how many pounds of apples did she purchase?

18

$$x + 2y = 17$$
$$5x - y = 8$$

If (x, y) is the solution to the given system of equations, what is the value of x ?

19

If $\sqrt{3x} = 12$, what is the value of x ?

20

The measure of angle B is $\frac{2}{5}\pi$ radians. If the degree measure of angle B is x° , what is the value of x ?

STOP**Do not turn to any other section.**



Math Test – Calculator

55 MINUTES, 38 QUESTIONS

Turn to Section 4 of your answer sheet to answer the questions in this section.

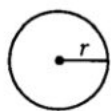
DIRECTIONS

For questions 1-30, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. For questions 31-38, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 31 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

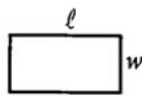
1. The use of a calculator is **not permitted**.
2. All variables and expressions used represent real numbers unless otherwise indicated.
3. Figures provided in this test are drawn to scale unless otherwise indicated.
4. All figures lie in a plane unless otherwise indicated.
5. Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE

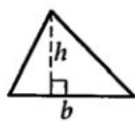


$$A = \pi r^2$$

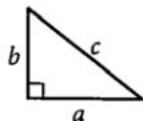
$$C = 2\pi r$$



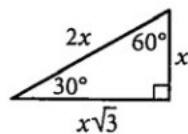
$$A = \ell w$$



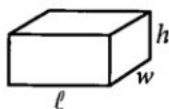
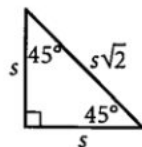
$$A = \frac{1}{2}bh$$



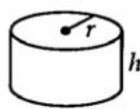
$$c^2 = a^2 + b^2$$



Special Right Triangles



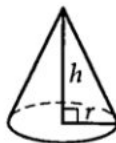
$$V = \ell wh$$



$$V = \pi r^2 h$$



$$V = \frac{4}{3}\pi r^3$$



$$V = \frac{1}{3}\pi r^2 h$$



$$V = \frac{1}{3}\ell wh$$

The number of degrees of arc in a circle is 360.

The number of radians of arc in a circle is 2π .

The sum of the measures in degrees of the angles of a triangle is 180.



1

Blueberries are shipped in crates whose volume is measured in pecks. A full crate holds 3 pecks of blueberries. How many gallons of blueberries are in a full crate? (1 peck = 2 gallons)

- A) 1
- B) 2
- C) 3
- D) 6

2

An object moves at a rate of x feet per hour. If the object moves 26 feet in 5 hours, what is the value of x ?

- A) 0.2
- B) 5.2
- C) 31
- D) 130

3

A town fair charges \$5 admission for residents and \$10 for nonresidents. The total cost for a group of r residents and n nonresidents to be admitted to the fair is \$120. Which of the following equations models the situation?

- A) $5r + 10n = 120$
- B) $10r + 5n = 120$
- C) $15r + 15n = 120$
- D) $15r + 20n = 120$

4

The function f is defined by $f(x) = 2x + 3$. What is the value of $f(-2)$?

- A) -2
- B) -1
- C) 0
- D) 1



Questions 5 and 6 refer to the following information.

Coupon 1

\$10 off a total purchase
of \$25 or more

Coupon 2

25% off a total purchase
of any amount

Note: Use either coupon, but not both

A department store gave the two coupons above to each customer entering the store on a particular day.

5

Josie purchased items that had a total price of \$150 and presented coupon 2 with her purchase. How much did Josie pay for her purchase?

- A) \$112.50
- B) \$113.50
- C) \$125.00
- D) \$135.00

6

Tasha, an employee at the store, gets an additional 10% discount off the final price of an item after all other discounts are applied. How much did Tasha pay for a television with an original price of \$600 when she presented her employee identification together with coupon 2?

- A) \$210
- B) \$390
- C) \$405
- D) \$565

7

Leonardo da Vinci's *Vitruvian Man* drawing was created using ancient Roman ideals of human proportion. In the drawing, the length of the man's upper arm is exactly $\frac{1}{8}$ of his height. If a man has the same proportions as the *Vitruvian Man* and a height of 72 inches, what is the length, in inches, of the man's upper arm?

- A) 4.5
- B) 7.2
- C) 8.0
- D) 9.0



8

A snack bag that contains only raisins and peanuts has no more than 970 calories. Each ounce of raisins has 85 calories, and each ounce of peanuts has 160 calories. If the snack bag contains a minimum of 5 ounces of peanuts, what is the maximum weight of raisins, in ounces, the bag could contain?

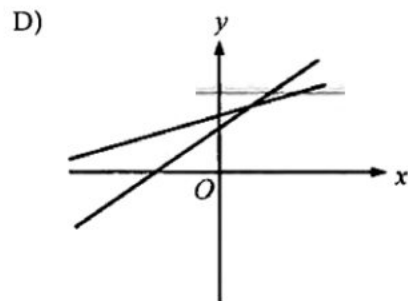
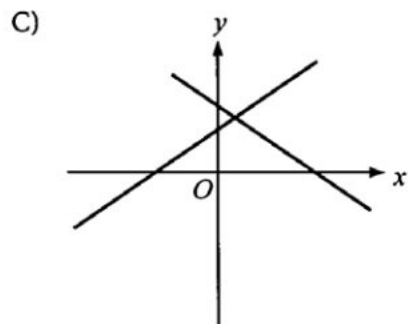
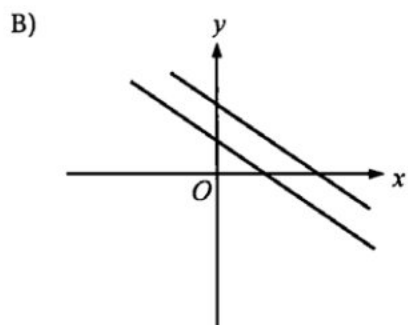
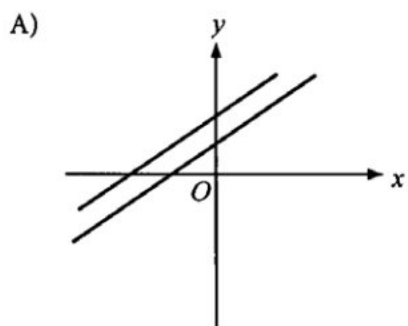
- A) 1
- B) 2
- C) 3
- D) 4

9

$$y = ax + b$$

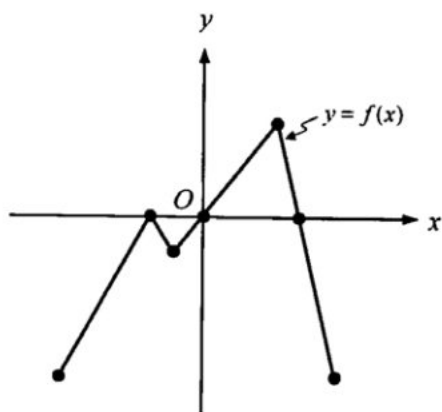
$$y = ax + 2b$$

In the system of equations above, a and b are positive constants. Which of the following could be the graph in the xy -plane?





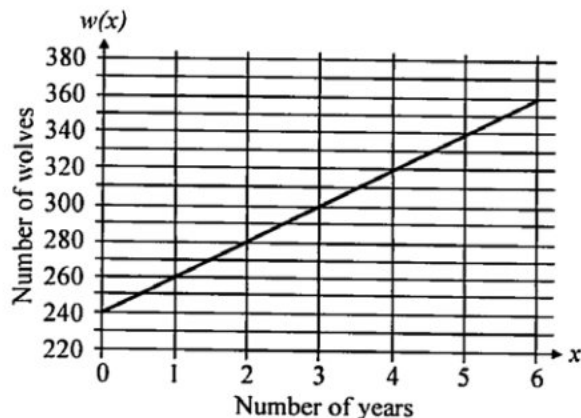
10



The complete graph of the function f is shown in the xy -plane above. For how many values of x does $f(x) = 0$?

- A) One
- B) Two
- C) Three
- D) More than three

Questions 11 and 12 refer to the following information.



At the end of each year from 2005 to 2010, researchers collected data on the wolf and moose populations in a certain ecosystem. The graph above models the number of wolves, $w(x)$, in the ecosystem x years after 2005. The function $m(x) = 1,155 - 55x$, where $0 \leq x \leq 6$, models the number of moose, $m(x)$, in the ecosystem x years after 2005.

11

According to the graph, what is the average annual increase in the number of wolves in the ecosystem between 2005 and 2010?

- A) 120
- B) 25
- C) 20
- D) 10



12

According to the model given, what was the number of moose in the ecosystem in 2008?

- A) 715
- B) 990
- C) 1,103
- D) 3,300

13

The number of feet that a car travels on a wet road from the time the driver applies the brakes until the car stops can be modeled by the function d , defined by $d(v) = 0.1v^2$, where v is the speed of the car, in miles per hour, when the brakes are applied. Which of the following is the best interpretation of the equation $d(40) = 160$?

- A) After the brakes are applied, the car travels 160 feet in 40 seconds before it stops.
- B) After the brakes are applied, the car travels .40 feet in 160 seconds before it stops.
- C) If the speed of the car is 40 miles per hour when the brakes are applied, the car travels 160 feet before it stops.
- D) If the speed of the car is 160 miles per hour when the brakes are applied, the car travels 40 feet before it stops.

14

The average concentration of a chemical, in parts per million (ppm), that remained in a sample of shellfish during an experiment was measured at the beginning of each of four consecutive months, as shown in the table below.

Month	Average concentration of chemical (ppm)
1	5.4
2	1.8
3	0.6
4	0.2

Which of the following best models these data?

- A) A linear model, where the average concentration of the chemical, in ppm, increases as time increases
- B) A linear model, where the average concentration of the chemical, in ppm, decreases as time increases
- C) An exponential model, where the average concentration of the chemical, in ppm, increases as time increases
- D) An exponential model, where the average concentration of the chemical, in ppm, decreases as time increases

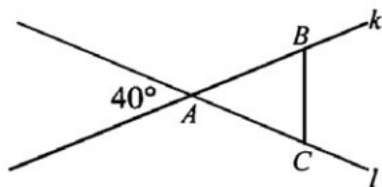


15

If $x - 5 = 5 - x$, what is the value of $x - 5$?

- A) -10
- B) -5
- C) 0
- D) 5

16



In the figure above, $AB = AC$. What is the measure of $\angle ABC$?

- A) 40°
- B) 50°
- C) 70°
- D) 80°

17

A data set with 51 values has a least value of 20 and a greatest value of 40. The data set is to be updated with a 25th value of 100. Which of the following statistics of the data set will NOT necessarily increase after the data set is updated?

- A) The median
- B) The mean
- C) The standard deviation
- D) The range

18

In the complex number system, which of the following is equivalent to $\frac{i^8}{i^4}$? (Note: $i = \sqrt{-1}$)

- A) $-\sqrt{-1}$
- B) $\sqrt{-1}$
- C) -1
- D) 1

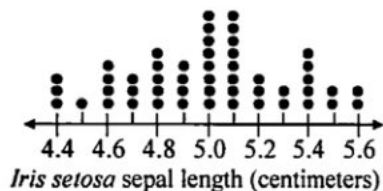
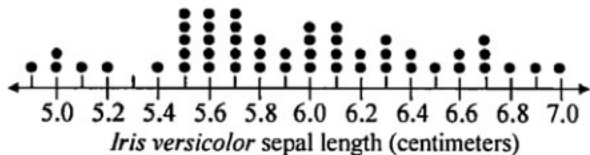


19

A town committee is planning a survey to find out whether town residents are satisfied with recent renovations performed on one of the local parks. Which of the following methods of collecting data for the survey may introduce bias?

- I. Sending a survey to all town residents living within 1 mile of the park
 - II. Sending a survey to a random sample of town residents living within the town borders
- A) Neither
 B) I only
 C) II only
 D) I and II

20

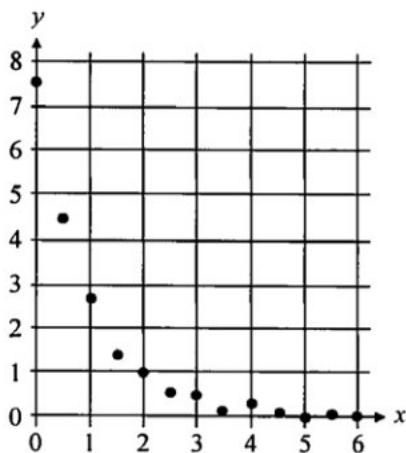


Each dot plot above shows the length, in centimeters, of 50 sepals from a particular species of iris flower. Which of the following is true about the data represented?

- A) The standard deviation of the *Iris versicolor* sepal length is greater than that of the *Iris setosa* sepal length.
- B) The standard deviation of the *Iris setosa* sepal length is greater than that of the *Iris versicolor* sepal length.
- C) The standard deviation of the *Iris versicolor* sepal length is equal to that of the *Iris setosa* sepal length.
- D) The standard deviation cannot be determined for either the *Iris versicolor* sepal length or the *Iris setosa* sepal length.



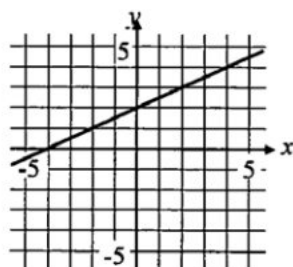
21



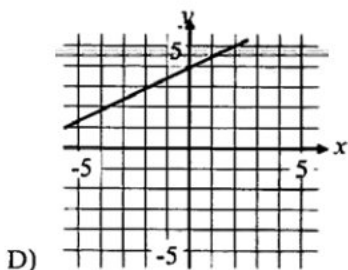
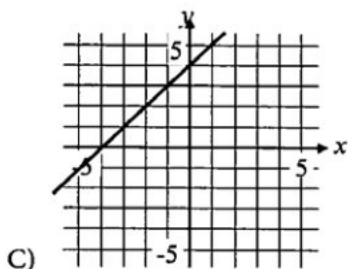
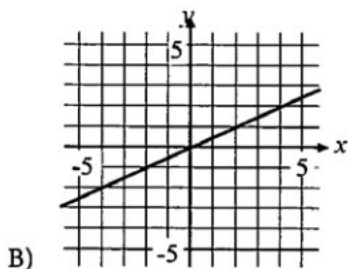
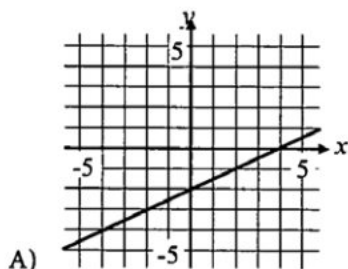
The scatterplot for a set of data is shown in the xy -plane above. Of the following exponential equations, which best models the data?

- A) $y = 3(7)^{-x}$
- B) $y = 3(7)^x$
- C) $y = 7(3)^{-x}$
- D) $y = 7(3)^x$

22



The graph of $y = f(x)$ is shown in the xy -plane above. Which of the following is the graph of $y = f(x) + 2$?





23

A company purchased a piece of equipment for \$40,000. Each year after the year of purchase, the value of the equipment is estimated to be 10% less than its value the previous year. Which of the following is closest to the estimated value of the equipment 4 years after it was purchased?

- A) \$2,000
- B) \$8,000
- C) \$24,000
- D) \$26,000

24

Which of the following expressions is equivalent to $16(2)^{3x}$?

- A) $2^{(12x)}$
- B) $2^{(3x+4)}$
- C) $4^{(2x+3)}$
- D) $32^{(3x)}$

25

A high school student council surveyed students to determine interest in an after-school computer coding course, 100 students were selected at random from all students in the school. 47% expressed interest in the course. Based on the margin of error, the student council expects that between 41% and 53% of all students would express interest in the course. What is the margin of error?

- A) 47%
- B) 12%
- C) 6%
- D) 0%



26

$$x^2 + 7 = 25 - 7x$$

The solutions of the equation above are r and s . What is the value of $r + s$?

- A) -11
- B) -7
- C) 7
- D) 11

27

$$\begin{aligned}3x + 2y &= 5 \\6x + ny &= 12\end{aligned}$$

In the system of equations above, n is a constant. If the system has no solutions, what is the value of n ?

- A) 2
- B) 4
- C) 6
- D) 12

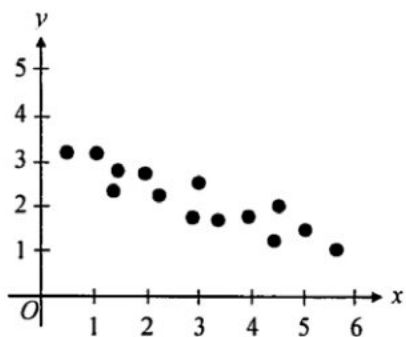
28

At a certain company, the employees are either managers or nonmanagers. In addition, the employees work in either marketing or sales. The probability of randomly selecting an employee who is a manager is 0.2. The probability of randomly selecting an employee who works in marketing and who is a nonmanager is 0.3. If there are 50 employees at the company, how many are nonmanagers who work in sales?

- A) 10
- B) 15
- C) 25
- D) 40



29



Which of the following is true about the slope m of a line of best fit (not shown) for the data in the scatterplot above?

- A) $-1 < m < 0$
- B) $0 < m < 1$
- C) $m < -1$
- D) $1 < m$

30

x	$h(x)$
2	m
4	p
6	m

The table above shows values of the function h for some values of x , where m and p are constants and $m > p > 0$. If $h(x) = a(x - 4)^2 + k$, where a and k are positive constants, which of the following must be true?

- A) $m = a$
- B) $m = k$
- C) $p = a$
- D) $p = k$

**DIRECTIONS**

For questions 31–38, solve the problem and enter your answer in the grid, as described below, on the answer sheet.

- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately. You will receive credit only if the circles are filled in correctly.
- Mark no more than one circle in any column.
- No question has a negative answer.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If $\begin{array}{|c|c|c|c|} \hline 3 & 1 & / & 2 \\ \hline \circ & \circ & \circ & \circ \\ \hline \end{array}$ is entered into the grid, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)
- Decimal answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid.

Write answer in boxes. →

Answer: $\frac{7}{12}$

	7	/	1	2	
○	○	○	○	○	
	0	0	0	0	
1	1	1	1	1	
2	2	2	2	2	
3	3	3	3	3	
4	4	4	4	4	
5	5	5	5	5	
6	6	6	6	6	
7	7	7	7	7	
8	8	8	8	8	
9	9	9	9	9	

← Fraction line

Grid in result.

Answer: 2.5

	2	.	5	
○	○	○	○	
	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	
8	8	8	8	
9	9	9	9	

← Decimal point

Acceptable ways to grid $\frac{2}{3}$ are:

	2	/	3	
○	○	○	○	
	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	

.	6	6	6	
○	○	○	○	
	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	

.	6	6	7	
○	○	○	○	
	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	

Answer: 201 – either position is correct

	2	0	1	
○	○	○	○	
	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	

	2	0	1	
○	○	○	○	
	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
7	7	7	7	

NOTE: You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.

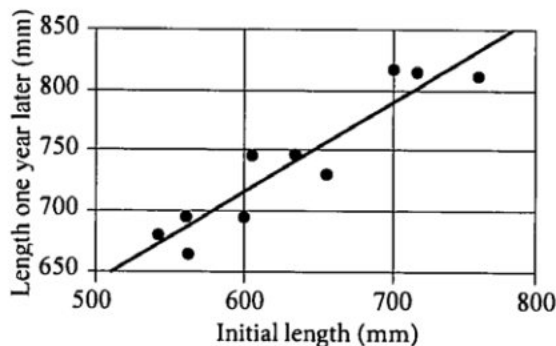


31

Company	Dimples per golf ball
A	300
B	425
C	475
D	400

The table above shows the number of dimples on golf balls from each of four companies. One golf ball is selected from each company. What is the mean number of dimples for the 4 golf balls?

31



The scatterplot above shows the initial length, in millimeters (mm), and the length one year later, in millimeters, for ten albacore fish, as well as a line of best fit for these data. For how many fish was the length one year later greater than predicted by the line of best fit?

33

What is the radius of the circle in the xy -plane with equation $x^2 + y^2 = 25$?

34

$$2px - 8 = 32 - px$$

Based on the equation above, what is the value of

$$px - \frac{8}{3}?$$

35

In the xy -plane, the graph of $3x - 4y = 20$ intersects the x -axis at $(c, 0)$. What is the value of c ?

36

$$\begin{aligned} y &= 2x(x+4) \\ 3x + y + 15 &= 0 \end{aligned}$$

If (x, y) is a solution to the system of equations above, what is one possible value of $|x + y|$?



Questions 37 and 38 refer to the following information.

Employees at the PQM Corporation

Specialist level	Salary grade			Total
	A	B	C	
I	10	1	0	11
II	6	10	8	24
III	0	6	15	21
Total	16	17	23	56

The table above shows the number of employees in the PQM Corporation who are at various specialist levels and salary grades. Employees who are in salary grade A are paid at a lower rate than those who are in salary grade B, and employees who are in salary grade B are paid at a lower rate than those who are in salary grade C.

38

It was announced that on January 1, 25% of the employees who are in salary grade A would be moved to salary grade B. Of the employees who are level I specialists salary grade A, 30% will be part of the move from salary grade A to salary grade B. If no other salary adjustments are to be made, how many employees who are level II specialists will be in salary grade B after January 1?

37

What fraction of employees who are level II specialists are in either salary grade B or C?

STOP

If you finish before time is called, you may check your work on this section only. Do not turn to any other section.