

PSAT/NMSQT®

CollegeBoard / **NATIONAL MERIT
SCHOLARSHIP CORPORATION**

**Wednesday
October 16, 2019**

Math tests

PSAT/NMSQT®

Preliminary SAT/National Merit Scholarship Qualifying Test

Test Book

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.**

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NF9T0001



Math Test – No Calculator

25 MINUTES, 17 QUESTIONS

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

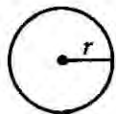
DIRECTIONS

For questions 1-13, solve each problem, choose the best answer from the choices provided, and fill in the corresponding bubble on your answer sheet. For questions 14-17, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 14 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

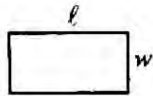
1. The use of a calculator is **not permitted**.
2. All variables and expressions used represent real numbers unless otherwise indicated.
3. Figures provided in this test are drawn to scale unless otherwise indicated.
4. All figures lie in a plane unless otherwise indicated.
5. Unless otherwise indicated,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

REFERENCE

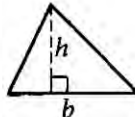


$$A = \pi r^2$$

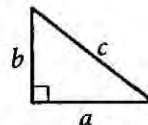
$$C = 2\pi r$$



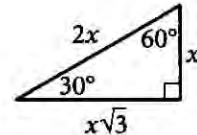
$$A = \ell w$$



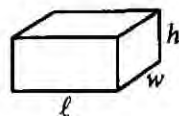
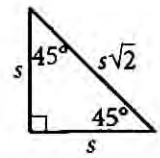
$$A = \frac{1}{2}bh$$



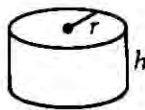
$$c^2 = a^2 + b^2$$



Special Right Triangles



$$V = \ell wh$$



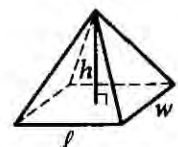
$$V = \pi r^2 h$$



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



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



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

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

$$4x + 3y = 24$$

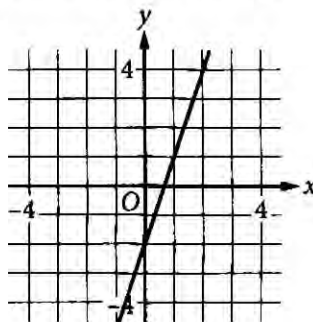
Mario purchased 4 binders that cost x dollars each and 3 notebooks that cost y dollars each. If the given equation represents this situation, which of the following is the best interpretation of 24 in this context?

- A) The total cost, in dollars, for all binders purchased
- B) The total cost, in dollars, for all notebooks purchased
- C) The total cost, in dollars, for all binders and notebooks purchased
- D) The difference in the total cost, in dollars, between the number of binders and notebooks purchased

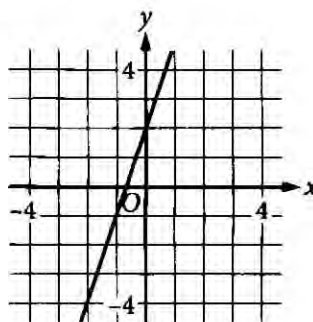
2

The function c is defined by $c(x) = 2x + 3$. Which of the following is the graph of $y = c(x)$?

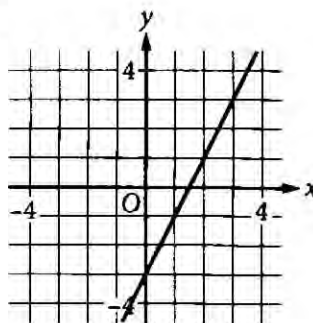
A)



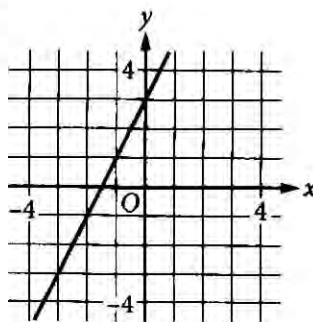
B)



C)



D)





5

A city's total expense budget for one year was x million dollars. The city budgeted y million dollars for departmental expenses and 201 million dollars for all other expenses. Which of the following represents the relationship between x and y in this context?

- A) $x + y = 201$
- B) $x - y = 201$
- C) $2x - y = 201$
- D) $y - x = 201$

1

$$y \leq x$$

$$y \leq -x$$

Which of the following ordered pairs (x, y) is a solution to the system of inequalities above?

- A) $(1, 0)$
- B) $(-1, 0)$
- C) $(0, 1)$
- D) $(0, -1)$

5

If $2(x - 5) + 3(x - 5) = 10$, what is the value of $x - 5$?

- A) 2
- B) 5
- C) 7
- D) 12

6

$$6x^2 + 5x - 7 = 0$$

What are the solutions to the given equation?

- A) $\frac{-5 \pm \sqrt{25 + 168}}{12}$
- B) $\frac{-6 \pm \sqrt{25 + 168}}{12}$
- C) $\frac{-5 \pm \sqrt{36 - 168}}{12}$
- D) $\frac{-6 \pm \sqrt{36 - 168}}{12}$



$$(2x + 5)^2 - (x - 2) + 2(x + 3)$$

Which of the following is equivalent to the expression above?

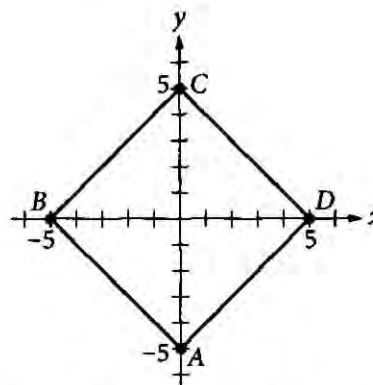
- A) $4x^2 + 21x + 33$
- B) $4x^2 + 21x + 29$
- C) $4x^2 + x + 29$
- D) $4x^2 + x + 33$

What is the y -intercept of the graph of $y = 3^{x+3}$ in the xy -plane?

- A) $(0, 0)$
- B) $(0, 3)$
- C) $(0, 9)$
- D) $(0, 27)$

Which expression is equivalent to $\sqrt{16x^{16}}$, where $x > 0$?

- A) $4x^4$
- B) $4x^8$
- C) $8x^4$
- D) $8x^8$



In the xy -plane shown, square $ABCD$ has its diagonals on the x - and y -axes. What is the area, in square units, of the square?

- A) 20
- B) 25
- C) 50
- D) 100



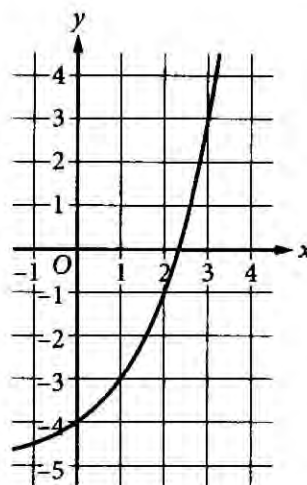
$$\begin{aligned}x^2 &= 6x + y \\y &= -6x + 36\end{aligned}$$

A solution to the given system of equations is (x, y) . Which of the following is a possible value of xy ?

- A) 0
- B) 6
- C) 12
- D) 36

Ms. Tabanelli deposits \$20,000 in an account that has a 5% annual interest rate compounded yearly. If she does not add to or withdraw from the account for 2 years, how much interest will she have earned for the 2-year period?

- A) \$50
- B) \$550
- C) \$2,000
- D) \$2,050



What is an equation of the graph shown?

- A) $y = 2^x + 4$
- B) $y = 2^x - 4$
- C) $y = 2^x - 5$
- D) $y = 2^x + 5$



DIRECTIONS

For questions 14-17, 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 bubbles accurately. You will receive credit only if the bubbles are filled in correctly.
- Mark no more than one bubble 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 $\begin{array}{|c|c|c|} \hline 3 & 1 & / & 2 \\ \hline \bullet & \bullet & \bullet & \bullet \\ \hline \end{array}$ 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
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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

← Fraction line

Grid in result.

Answer: 2.5

	2	.	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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

.	6	6	6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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

.	6	6	7
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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

Answer: 201 – either position is correct

	2	0	1
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1	1
2	2	2	2
3	3	3	3

2	0	1	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	1	1	1
2	2	2	2
3	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.



11

The function g is defined by $g(x) = \frac{1}{2}x - 1$. What is the value of $g(6)$?

15

$$3(2x - 1) = 4x + 12$$

What value of x satisfies the equation above?

16

$$y = \frac{1}{2}x + 8$$
$$y = cx + 10$$

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

17

If $\frac{1}{x} + \frac{1}{3x} = 5$, what is the value of $\frac{3x}{4}$?

STOP

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



Math Test – Calculator

45 MINUTES, 31 QUESTIONS

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

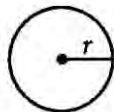
DIRECTIONS

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NOTES

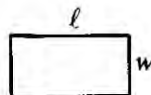
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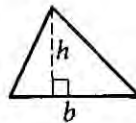


$$A = \pi r^2$$

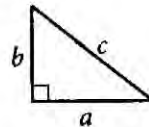
$$C = 2\pi r$$



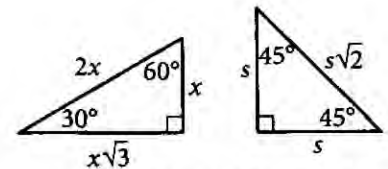
$$A = \ell w$$



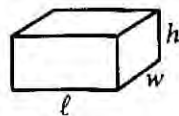
$$A = \frac{1}{2}bh$$



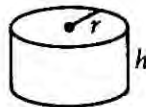
$$c^2 = a^2 + b^2$$



Special Right Triangles



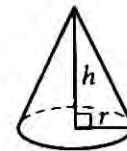
$$V = \ell wh$$



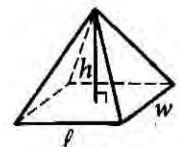
$$V = \pi r^2 h$$



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



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



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

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 The distance between two towns is 3 miles. What is the distance between these two towns, in feet? (1 mile = 5,280 feet)

- A) 1,760
- B) 5,283
- C) 15,840
- D) 21,120

2 During a sale, the original prices of all the items in a clothing store have been reduced by 20%. What is the sale price of a jacket with an original price of \$50?

- A) \$12
- B) \$30
- C) \$36
- D) \$40



Questions 3 and 4 refer to the following information.

On May 16, 2011, the space shuttle *Endeavour* launched for the last time. The total mass of the entire spacecraft includes the *Endeavour* shuttle, its external rockets, its fuel tank, and its fuel. The total mass of the entire spacecraft changed as fuel was used. The model below shows the predicted mass m , in thousands of kilograms, of the entire spacecraft t seconds after the launch.

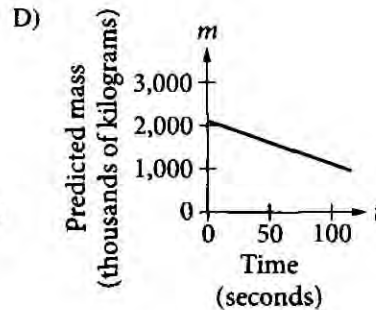
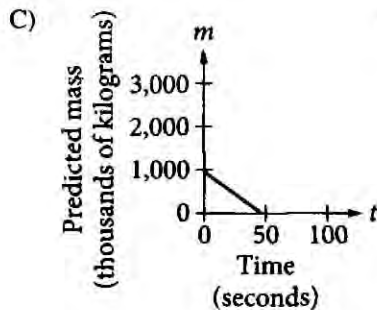
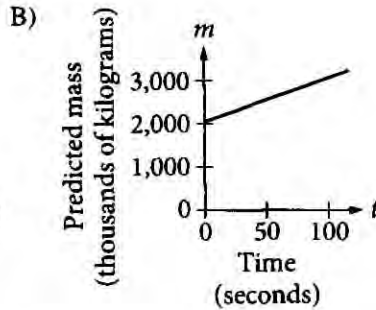
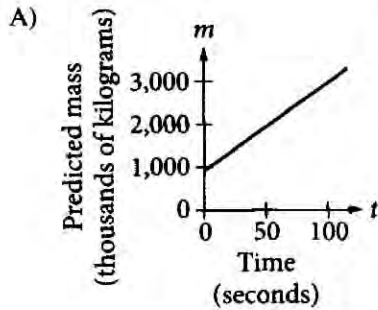
$$m = 2,050 - 9.75t, 0 \leq t \leq 120$$

According to the given model, what was the predicted mass, in thousands of kilograms, of the entire spacecraft 60 seconds after launch?

- A) 585
- B) 1,465
- C) 1,995
- D) 2,635



Which of the following graphs represents the relationship between t and m ?



9, 9, 10.5, 11, 11.5, 12, 12

The given data show the age, in years, of 7 domesticated sheep. Based on these data, which of the following statements about these sheep is true?

- A) The median age is equal to the mean age.
- B) The median age is greater than the mean age.
- C) The range of ages is equal to the mean age.
- D) The range of ages is greater than the mean age.



6

Data set A: 5, 5, 5, 5, 5, 5, 5, 5

Data set B: 5, 5, 5, 5, 5, 5, 5, 5, 100

Which of the following statements about the means and medians of data set A and data set B is true?

- A) Only the means are different.
- B) Only the medians are different.
- C) Both the means and the medians are different.
- D) Neither the means nor the medians are different.

7

The Danyang-Kunshan Grand Bridge in China has a length of 164.8 kilometers. Which of the following best approximates the length, in miles, of the Danyang-Kunshan Grand Bridge?

(1 kilometer = 0.6214 mile)

- A) 265.2
- B) 165.4
- C) 164.2
- D) 102.4

8

$$(1 - x)(x + 2)^2(x + 3) = 0$$

Which of the following is a solution to the equation above?

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

9

A gold dredge is a machine that was used in the early 1900s to extract gold from a river or pond. The amount of dirt a gold dredge can dig in 1 minute is equal to the amount it would take 3 people, each digging at the same rate, to dig in 1 day. At this rate, how many days would it take 1 person to dig as much dirt as a gold dredge can dig in 30 minutes?

- A) 30
- B) 45
- C) 60
- D) 90

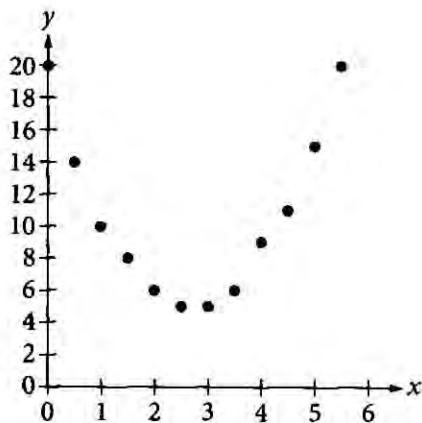


10

A store manager reviewed the receipts from 80 customers who were selected at random from all the customers who made purchases last Thursday. Of those selected, 20 receipts showed that the customer had purchased fruit. If 1,500 customers made purchases last Thursday, which of the following is the most appropriate conclusion?

- A) Exactly 75 customers must have purchased fruit last Thursday.
- B) Exactly 375 customers must have purchased fruit last Thursday.
- C) The best estimate for the number of customers who purchased fruit last Thursday is 75.
- D) The best estimate for the number of customers who purchased fruit last Thursday is 375.

11



Of the following, which is the best model for the data in the scatterplot?

- A) $y = 2x^2 - 11x - 20$
- B) $y = 2x^2 - 11x + 20$
- C) $y = 2x^2 - 5x - 3$
- D) $y = 2x^2 - 5x + 3$

12

A right circular cylinder has a volume of 45π . If the height of the cylinder is 5, what is the radius of the cylinder?

- A) 3
- B) 4.5
- C) 9
- D) 40

13

$$\begin{aligned} w &= a + 2 \\ z &= a \end{aligned}$$

The equations above define w and z in terms of a . What is $2wz$ in terms of a ?

- A) $2a + 2$
- B) $4a + 4$
- C) $2a^2 + 2$
- D) $2a^2 + 4a$



11

Which of the following represents the result of increasing the quantity x by 5%, where $x > 0$?

- A) $5x$
- B) $1.05x$
- C) $1.005x$
- D) $0.5x$

15

$$H = 120p + 60$$

The Karvonen formula above shows the relationship between Alice's target heart rate H , in beats per minute (bpm), and the intensity level p of different activities. When $p = 0$, Alice has a resting heart rate. When $p = 1$, Alice has her maximum heart rate. It is recommended that p be between 0.5 and 0.85 for Alice when she trains. Which of the following inequalities describes Alice's target training heart rate?

- A) $120 \leq H \leq 162$
- B) $102 \leq H \leq 120$
- C) $60 \leq H \leq 162$
- D) $60 \leq H \leq 102$

16

If $4x - \frac{1}{2} = -5$, what is the value of $8x - 1$?

- A) 2
- B) $-\frac{9}{8}$
- C) $-\frac{5}{2}$
- D) -10



Questions 17 and 18 refer to the following information.

State	Power capacity			
	Low	Medium	High	Total
Texas	4	2	3	9
California	1	0	1	2
Oregon	1	0	1	2
Indiana	0	2	0	2
Colorado	1	1	0	2
Iowa	2	0	0	2
Oklahoma	1	0	0	1
Total	10	5	5	20

The table shows the distribution, by location and power capacity (maximum rate of power generation) of the twenty largest wind projects in the United States in 2013. The total power capacity of the nine wind projects located in Texas was 4,952 megawatts (MW), and the total power capacity of the twenty wind projects was 11,037 MW in 2013.

17

If one of the projects in Texas that is represented in the table is selected at random, what is the probability that the project selected had a medium or high power capacity?

- A) $\frac{2}{9}$
- B) $\frac{3}{9}$
- C) $\frac{4}{9}$
- D) $\frac{5}{9}$

18

The amount of energy produced in one hour at a rate of one megawatt is one megawatt-hour. If each of the nine Texas wind projects in 2013 had operated continuously for 24 hours at the maximum rate of power generation, approximately how many megawatt-hours of energy would the nine projects have produced?

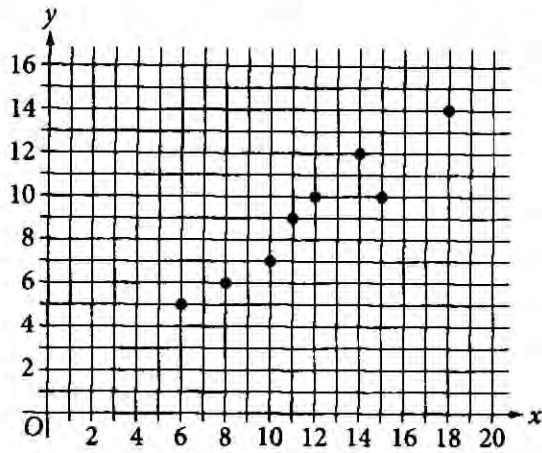
- A) 200
- B) 5,000
- C) 11,000
- D) 120,000

19

$$f(x) = x^2 + bx + 5$$

In the given function, b is a constant. If $f(1) = 0$, what is the value of $f(3)$?

- A) -6
- B) -4
- C) -3
- D) 5



Of the following equations, which could be an equation of a line of best fit for the data points shown in the xy -plane above?

- A) $y = 0.3 + 0.8x$
- B) $y = 0.8 + 0.3x$
- C) $y = 0.8 + 4x$
- D) $y = 4 + 0.8x$

In an article about exercise, it is estimated that a 160-pound adult uses 200 calories for every 30 minutes of hiking and 150 calories for every 30 minutes of bicycling. An adult who weighs 160 pounds has completed 1 hour of bicycling. Based on the article, how many hours should the adult hike to use a total of 1,900 calories from bicycling and hiking?

- A) 9.5
- B) 8.75
- C) 6
- D) 4

In the xy -plane, the graph of $y = x^2 - 9$ intersects line p at $(1, a)$ and $(5, b)$, where a and b are constants. What is the slope of line p ?

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

What is the minimum value of the function f defined by $f(x) = (x - 2)^2 - 4$?

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



24

Which of the following is true about the values of 2^x and $2x + 2$ for $x > 0$?

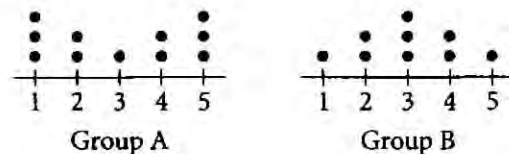
- A) For all $x > 0$, it is true that $2^x < 2x + 2$.
- B) For all $x > 0$, it is true that $2^x > 2x + 2$.
- C) There is a constant c such that if $0 < x < c$, then $2^x < 2x + 2$, but if $x > c$, then $2^x > 2x + 2$.
- D) There is a constant c such that if $0 < x < c$, then $2^x > 2x + 2$, but if $x > c$, then $2^x < 2x + 2$.

25

During a month, Morgan ran r miles at 5 miles per hour and biked b miles at 10 miles per hour. She ran and biked a total of 200 miles that month, and she biked for twice as many hours as she ran. What is the total number of miles that Morgan biked during the month?

- A) 80
- B) 100
- C) 120
- D) 160

26



The dot plots summarize two data sets. How does the mean of group A compare to the mean of group B?

- A) The mean of group A is greater than the mean of group B.
- B) The mean of group A is less than the mean of group B.
- C) The mean of group A is equal to the mean of group B.
- D) There is not enough information given to compare the means.

27

$$\begin{aligned} \frac{x}{2} + 2y &= 14 \\ x - \frac{y}{2} &= 1 \end{aligned}$$

In the system of equations above, what is the value of $\frac{x}{2}$?

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



x	$f(x)$
1	a
2	a^5
3	a^9

For the exponential function f , the table above shows several values of x and their corresponding values of $f(x)$, where a is a constant greater than 1. If k is a constant and $f(k) = a^{29}$, what is the value of k ?

$$(a - 12)x = a + 8$$

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

Questions 30 and 31 refer to the following information.

	Phone	Email
Dinner dance	55%	80%
Football game	20%	10%
Picnic	20%	5%
Pool party	5%	5%
Total	100%	100%

An alumni association survey asked each high school graduate to select the one activity he or she preferred for the association's next event. Some of the people responded by phone, and the others responded by email. The table above shows the distribution of preferred activity, in percent, for each response type used.

30

If 40 of the people who responded by phone preferred a picnic, how many of the people who responded by phone preferred a dinner dance?

31

For the survey, the number of email responses was twice the number of phone responses. If a person who preferred a picnic is selected at random, what is the probability that the person responded by email?

STOP

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

Score Conversion

Score conversions show how raw scores are converted into test scores, cross-test scores, and subscores.

IMPORTANT TO NOTE

- The section score for the Evidence-Based Reading and Writing section is calculated by adding the Reading Test score to the Writing and Language Test score and multiplying that figure by 10.
- The section score for the Math section is calculated by multiplying the Math Test score by 20.
- There is no advantage or disadvantage in taking any particular test form.
- On every test, certain scores are not available, and are referred to as “score gaps.” Score gaps emerge as a result of a statistical process called *equating* in which the number of questions answered correctly and the difficulty of the questions are both considered when scoring across the different tests taken nationwide. Although the College Board works to develop tests with the same level of difficulty, the questions in them differ and therefore some can be slightly easier or harder than others. This can influence the placement of the score gaps throughout the scaled score range. With equating, test scores are equivalent and valid, regardless of when students tested or the level of difficulty of the test they took.

NOTE: Score conversions will not be available for the Saturday, October 19 test form or for schools participating in the test administration study or research group.

Wednesday, Oct. 16 Test Form

Raw Score (# of correct answers)	Reading Test Score	Writing and Language Test Score	Math Test Score
48			38
47	38		37
46	36		36.5
45	35		35.5
44	34	38	34.5
43	33	37	33.5
42	32	35	32.5
41	32	34	32
40	31	33	31.5
39	30	33	31
38	29	32	30.5
37	29	31	30
36	28	30	29.5
35	28	30	29.5
34	27	29	29
33	27	28	28.5
32	26	28	28.5
31	26	27	28
30	26	27	27.5
29	25	26	27.5
28	25	26	27
27	24	25	26.5
26	24	25	26.5
25	23	24	26
24	23	23	25.5
23	22	23	25
22	22	22	25
21	21	21	24.5
20	21	21	24
19	20	20	23.5
18	20	20	23
17	20	19	22.5
16	19	18	22.5
15	19	18	22
14	18	17	21.5
13	18	17	20.5
12	17	16	20
11	17	16	19.5
10	16	15	18.5
9	16	15	18
8	15	14	17
7	14	14	16.5
6	13	13	15.5
5	12	12	14
4	11	11	13
3	10	11	11.5
2	9	10	10.5
1	9	9	9.5
0	8	8	8

Answer Key

Wednesday, Oct. 16, Answer Key 1

Reading Test		Writing and Language Test		Math Test – No Calculator	
SECTION 1		SECTION 2		SECTION 3	
1	A	1	C	1	C
2	B	2	B	2	D
3	B	3	A	3	B
4	D	4	B	4	D
5	D	5	C	5	A
6	C	6	D	6	A
7	B	7	A	7	A
8	D	8	B	8	D
9	A	9	C	9	B
10	C	10	D	10	C
11	C	11	D	11	A
12	A	12	A	12	D
13	A	13	C	13	C
14	B	14	A	14	2
15	D	15	B	15	15/2, 7.5
16	D	16	C	16	1/2, .5
17	B	17	A	17	1/5, .2
18	C	18	D		
19	B	19	D		
20	A	20	C		
21	A	21	C		
22	D	22	D		
23	B	23	B		
24	A	24	C		
25	C	25	D		
26	C	26	A		
27	D	27	D		
28	A	28	C		
29	D	29	D		
30	C	30	A		
31	D	31	D		
32	A	32	B		
33	B	33	C		
34	C	34	B		
35	A	35	C		
36	D	36	B		
37	C	37	A		
38	B	38	A		
39	C	39	A		
40	B	40	D		
41	A	41	B		
42	C	42	D		
43	D	43	C		
44	B	44	D		
45	A				
46	B				
47	D				

Math Test – Calculator	
SECTION 4	
1	C
2	D
3	B
4	D
5	B
6	A
7	D
8	A
9	D
10	D
11	B
12	A
13	D
14	B
15	A
16	D
17	D
18	D
19	B
20	A
21	D
22	A
23	A
24	C
25	D
26	C
27	D
28	8
29	12
30	110
31	1/3, .333

NOTE: For more detailed information about scores, visit psat.org/resources.

Wednesday, Oct. 16, Answer Key 2

Reading Test		Writing and Language Test		Math Test – No Calculator	
SECTION 1		SECTION 2		SECTION 3	
1	A	1	C	1	D
2	B	2	B	2	B
3	B	3	A	3	D
4	D	4	B	4	A
5	C	5	C	5	C
6	D	6	D	6	C
7	B	7	A	7	A
8	D	8	B	8	A
9	A	9	C	9	D
10	C	10	D	10	B
11	C	11	D	11	D
12	A	12	A	12	C
13	A	13	C	13	A
14	B	14	A	14	15/2, 7.5
15	D	15	B	15	2
16	D	16	C	16	1/2, .5
17	C	17	A	17	1/5, .2
18	B	18	D		
19	B	19	D		
20	A	20	C		
21	A	21	C		
22	D	22	D		
23	A	23	B		
24	C	24	C		
25	C	25	B		
26	B	26	A		
27	D	27	A		
28	A	28	A		
29	D	29	D		
30	D	30	B		
31	A	31	D		
32	C	32	C		
33	B	33	D		
34	C	34	B		
35	A	35	C		
36	D	36	D		
37	C	37	A		
38	B	38	D		
39	C	39	C		
40	B	40	D		
41	A	41	A		
42	C	42	D		
43	D	43	B		
44	B	44	C		
45	B				
46	D				
47	A				

Math Test – Calculator	
SECTION 4	
1	B
2	C
3	D
4	B
5	D
6	A
7	D
8	D
9	A
10	D
11	A
12	B
13	A
14	D
15	B
16	D
17	D
18	B
19	A
20	D
21	A
22	C
23	D
24	D
25	A
26	C
27	D
28	12
29	8
30	110
31	1/3, .333

NOTE: For the Wednesday, Oct. 16, test form, though the order of the test questions may differ, the test questions themselves do not.

NOTE: For schools participating in the test administration study in fall 2019, correct answers will not be provided. Correct answers will also not be provided for the Saturday, Oct. 19, test form.