

## 1  
 $4x$   
 If  $-- = 0$ , then  $x$  is equal to  
 12

- A 0
- B 3
- C 8
- D 12
- E 16

##

Mathematics needed to answer this question was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 2  
 2 meters + 3 millimeters  
 is equal to

- A 2.0003 meters
- B 2.003 meters
- C 2.03 meters
- D 2.3 meters
- E 5 meters

##

Mathematics needed to answer this question was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 3  
 [ Picture ]

Which of these is a correct statement for this triangle?

- A  $x\hat{y} = 3\hat{y} + 4\hat{y}$
- B  $x\hat{y} + 3\hat{y} = 4\hat{y}$
- C  $x = 4\hat{y} - 3\hat{y}$
- D  $x\hat{y} = 4\hat{y} - 3\hat{y}$
- E  $x\hat{y} = 4 + 3$

##

Mathematics needed to answer this question was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 4  
 If  $y$  dollars are shared equally among four boys, how many dollars does each boy receive?

- A  $y - 4$
- B  $\frac{y}{4}$
- C  $\frac{4}{y}$
- D  $y$

Mathematics needed to answer this question

- C 4  
 D  $\frac{y}{4}$   
 E 4y

##

was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 5  
 a b  
 -- - - is equal to  
 15 5

A  $\frac{a - 3b}{15}$

B  $\frac{5a - 15b}{15}$

C  $\frac{a - b}{10}$

D  $\frac{a - b}{75}$

E None of these

##

Mathematics needed to  
 answer this question  
 was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 6  
 [ Picture ]

Which statement can be used to  
 find the value of y ?

A  $y = 180 - 30$

B  $y = 270 - 30$

C  $y = 270 + 30$

D  $y = 360 - 30$

E  $y = 360 + 30$

##

Mathematics needed to  
 answer this question  
 was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 7  
 Michael has a large number of  
 wooden blocks which are cubical  
 in shape with each edge 1 centimeter  
 long. What is the maximum number of  
 these blocks that can be used to fill  
 a rectangular box with interior

dimensions 10 centimeters long, 10 centimeters wide and 7 centimeters high?

- A 27
- B 70
- C 140
- D 280
- E 700

##

## 8

1st row 1  
2nd row 1 - 1  
3rd row 1 - 1 + 1  
4th row 1 - 1 + 1 - 1  
5th row 1 - 1 + 1 - 1 + 1

What is the sum of the 50th row?

- A 0
- B 1
- C 2
- D 25
- E 30

##

## 9

162 x 45 is equal to

- A 1378
- B 1458
- C 5890
- D 6290
- E 7290

##

## 10

Among the following lines

$d_1, d_2, d_3, d_4, d_5$ , which

has no point equidistant from

P and from Q?

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
no \_\_\_\_\_

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
no \_\_\_\_\_

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
no \_\_\_\_\_

A d  
1

B d  
2

C d  
3

D d  
4

E d  
5

##

Mathematics needed to answer this question was taught:  
this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:  
yes \_\_\_\_\_  
no \_\_\_\_\_

## 11

Which of these numbers is a prime number?

A 21

B 22

C 23

D 24

E 25

##

Mathematics needed to answer this question was taught:  
this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:  
yes \_\_\_\_\_  
no \_\_\_\_\_

## 12

A runner ran 3,000 meters in exactly 8 minutes. What was his average speed in meters per second?

A 3.75

B 6.25

C 16.0

D 37.5

E 62.5

##

Mathematics needed to answer this question was taught:  
this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:  
yes \_\_\_\_\_  
no \_\_\_\_\_

## 13

a, b and c are numbers greater than 0. Which of these is NOT

equal to  $\frac{a}{b} - ?$

a -3

A     - x --  
      b   -3

B     a   c  
      - x -  
      b   c

C     a   101  
      - x ---  
      b   101

D     a  
      - x 1  
      b

E     a  
      - x 0  
      b

##

Mathematics needed to  
answer this question  
was taught:  
  this year    \_\_\_\_\_  
  before       \_\_\_\_\_  
  never        \_\_\_\_\_

Calculator used:  
  yes           \_\_\_\_\_  
  no            \_\_\_\_\_

## 14  
  [ Picture ]

a  $\triangle ABC$  and  $\triangle A'B'C'$  are congruent  
and their corresponding sides  
are parallel.  $\triangle ABC$  maps onto  
 $\triangle A'B'C'$  by a

[ Note: the character  $\triangle$  denotes the character for a triangle ]

A     reflection  
B     glide reflection  
C     rotation  
D     enlargement  
E     translation

##

Mathematics needed to  
answer this question  
was taught:  
  this year    \_\_\_\_\_  
  before       \_\_\_\_\_  
  never        \_\_\_\_\_

Calculator used:  
  yes           \_\_\_\_\_  
  no            \_\_\_\_\_

## 15  
  [ Picture ]

The line  $m$  is a line of symmetry  
for figure  $ABCDE$ . The measure  
of angle  $BCD$  is

A      $30^\circ$   
B      $50^\circ$   
C      $60^\circ$   
D      $70^\circ$   
E      $110^\circ$

##

Mathematics needed to  
answer this question  
was taught:  
  this year    \_\_\_\_\_  
  before       \_\_\_\_\_  
  never        \_\_\_\_\_

Calculator used:  
  yes           \_\_\_\_\_  
  no            \_\_\_\_\_

## 16  
[ Picture ]

AB<sup>33</sup> DC and AD<sup>33</sup> BC. Quadrilateral

ABCD is a

- A rhombus
- B parallelogram
- C square
- D rectangle
- E none of the above

##

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
 no \_\_\_\_\_

## 17  
1A 15 centimeter piece is cut from a ribbon 1 meter long. What is the length of the remaining piece?

- A 85 cm
- B 115 cm
- C 985 cm
- D 1015 cm
- E 9985 cm

##

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
 no \_\_\_\_\_

## 18

Test score	Tally	Frequency
4	/	1
5	///	3
6	//// /	6
7	//	2
8	////	4
9	///	3
10	/	1

The table shows scores for a class on a 10-point test. How many in the class made a score GREATER THAN 7?

- A 2
- B 8

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
 before \_\_\_\_\_

C 10

never \_\_\_\_\_

D 12

Calculator used:

E 20

yes \_\_\_\_\_

##

no \_\_\_\_\_

## 19

[ Picture ]

In the graph, rainfall in centimeters is plotted for 13 weeks. The average weekly rainfall during the period is approximately

A 1 centimeter

Mathematics needed to answer this question was taught:

B 2 centimeters

this year \_\_\_\_\_

C 3 centimeters

before \_\_\_\_\_

D 4 centimeters

never \_\_\_\_\_

E 5 centimeters

Calculator used:

##

yes \_\_\_\_\_

no \_\_\_\_\_

## 20

[ Picture ]

If D is the direction of projection and A is the axis of projection, which of the following statements is correct?

A  $p(a) = b$

Mathematics needed to answer this question was taught:

B  $p(d) = c$

this year \_\_\_\_\_

C  $p(d) = f$

before \_\_\_\_\_

D  $p(g) = h$

never \_\_\_\_\_

E  $p(c) = d$

Calculator used:

##

yes \_\_\_\_\_

no \_\_\_\_\_

## 21

[ Picture ]

A square is removed from the rectangle as shown. What is the area of the remaining part?

A 316 m<sup>2</sup>

Mathematics needed to answer this question was taught:

B 300 m<sup>2</sup>

this year \_\_\_\_\_

C 284 m<sup>2</sup>

before \_\_\_\_\_

D 80 m<sup>2</sup>

never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_

## E 16 mý  
##

no \_\_\_\_\_

## 22  
Since  $4 \times 9 = 36$ ,  
36 is equal to

A  $4 \times 9$

B  $4 \times 3$

C  $2 \times 9$

D  $2 \times 3$

E  $2 \times 3$

##

Mathematics needed to  
answer this question  
was taught:  
this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:  
yes \_\_\_\_\_  
no \_\_\_\_\_

## 23  
[ Picture ]

The position on the scale indicated  
by the arrow is

A 1.004

B 1.04

C 1.08

D 1.4

E 1.8

##

Mathematics needed to  
answer this question  
was taught:  
this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:  
yes \_\_\_\_\_  
no \_\_\_\_\_

## 24  
A painter is to mix green and yellow  
paint in the ratio of 4 to 7 to obtain  
the color he wants. If he has 28  
liters of green paint, how many liters  
of yellow paint should be added?

A 11

B 16

C 28

D 49

E 196

##

Mathematics needed to  
answer this question  
was taught:  
this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:  
yes \_\_\_\_\_  
no \_\_\_\_\_

## 25  
4<sup>3</sup> ÷ 4<sup>3</sup>  
= 4<sup>3-3</sup>  
= 4<sup>0</sup>  
= 1



One of the following figures is congruent with the figure above. Which one?

A [ Figure ]

B [ Figure ]

C [ Figure ]

D [ Figure ]

E [ Figure ]

##

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_

before \_\_\_\_\_

never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_

no \_\_\_\_\_

## 26

[ Picture ]

In the figure the little squares are all the same size and the area of the whole rectangle is equal to 1. The area of the shaded part is equal to

A  $\frac{2}{15}$

B  $\frac{1}{3}$

C  $\frac{2}{5}$

D  $\frac{3}{8}$

E  $\frac{1}{2}$

##

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_

before \_\_\_\_\_

never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_

no \_\_\_\_\_

## 27

Four 1-liter bowls of ice cream were set out at a party. After the party, 1 bowl was empty, 2 were half full, and 1 was three-quarters full. How many liters of ice cream had been EATEN?

A  $\frac{3}{4}$

- B      3  
       2 -  
       4
- C      1  
       2 -  
       2
- D      3  
       1 -  
       4
- E      None of these
- ##

Mathematics needed to answer this question was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 28  
 [ Picture ]

The Davis family took a car trip from Anabru through Bergen to Chase. They then drove back to Bergen through Earlville, and then returned to their home in Anabru. If the total distance they drove was 115 kilometers, how far is it from Anabru to Bergen?

- A      20 kilometers
- B      35 kilometers
- C      40 kilometers
- D      75 kilometers
- E      80 kilometers
- ##

Mathematics needed to answer this question was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 29  
 0.00046 is equal to

- A       $46 \times 10^{-3}$
- B       $4.6 \times 10^{-4}$
- C       $0.46 \times 10^3$
- D       $4.6 \times 10^4$
- E       $46 \times 10^5$
- ##

Mathematics needed to answer this question was taught:  
 this year \_\_\_\_\_  
 before \_\_\_\_\_  
 never \_\_\_\_\_

Calculator used:  
 yes \_\_\_\_\_  
 no \_\_\_\_\_

## 30  
 [ Picture ]

The measure of the angle shown is nearest to:

- A 155°
- B 145°
- C 50°
- D 35°
- E 15°

##

Mathematics needed to answer this question was taught:

- this year \_\_\_\_\_
- before \_\_\_\_\_
- never \_\_\_\_\_

Calculator used:

- yes \_\_\_\_\_
- no \_\_\_\_\_

## 31

Here is a table of data and a graph of the same data. What is x ?

Number of Cars	Frequency
0 or 1	2
2 or 3	x
4 or 5	7
6 or 7	3

[ Picture ]

- A 2
- B 3
- C 4
- D 5
- E 6

##

Mathematics needed to answer this question was taught:

- this year \_\_\_\_\_
- before \_\_\_\_\_
- never \_\_\_\_\_

Calculator used:

- yes \_\_\_\_\_
- no \_\_\_\_\_

## 32

[ Picture ]

If  $\triangle XYZ$  is a triangle similar to

$\triangle ABC$  but with side  $YZ$  10 cm long and

side  $XZ$  8 cm long, how long is side  $XY$  ?

[ Note: the character  $\triangle$  denotes the character for a triangle ]

- A 4 cm
- B 5 cm
- C 6 cm

Mathematics needed to answer this question was taught:

- this year \_\_\_\_\_
- before \_\_\_\_\_
- never \_\_\_\_\_

D 8 cm

E 9 cm

##

Calculator used:

yes \_\_\_\_\_  
no \_\_\_\_\_

## 33

[ Picture ]

In the diagram, OPQR is a parallelogram, O is the origin, the coordinates of point P are (3,1) and those of point R are (1,4). What are the coordinates of point Q ?

A (4,5)

B (5,4)

C (3,4)

D (4,3)

E (2,7)

##

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
no \_\_\_\_\_

## 34

The set of integers less than 5 is represented on one of the number lines shown below. Which one?

A [ Figure ]

B [ Figure ]

C [ Figure ]

D [ Figure ]

E [ Figure ]

##

Mathematics needed to answer this question was taught:

this year \_\_\_\_\_  
before \_\_\_\_\_  
never \_\_\_\_\_

Calculator used:

yes \_\_\_\_\_  
no \_\_\_\_\_