TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

• Be sure to read carefully all the directions in the test book.
• You may use your tools to help you solve any problem on the test.
• Read each question carefully and think about the answer before choosing your response.

This picture means that you will use your ruler.

This picture means that you will use your protractor.
Sample A

Samuel picked 150 strawberries at the strawberry patch. He gave away all the strawberries to 5 friends. If Samuel gave the same number of strawberries to each friend, how many strawberries did each friend receive?

A 30
B 50
C 145
D 155

Sample B

Kirsten read a number of books, $k$. Eric read 3 books fewer than Kirsten. What expression can be used to find the number of books Eric read?

A $k - 3$
B $k + 3$
C $3 - k$
D $3 \times k$
1. Which proportion is correct?
   
   A \( \frac{4}{5} = \frac{7}{15} \)
   
   B \( \frac{7}{15} = \frac{10}{15} \)
   
   C \( \frac{4}{5} = \frac{20}{25} \)
   
   D \( \frac{10}{15} = \frac{20}{25} \)

2. Shirley’s wading pool holds 368 quarts of water. How many gallons of water does it hold?

   1 gallon = 4 quarts
   
   A 92
   
   B 364
   
   C 372
   
   D 1,472
The spinner below is divided into 6 equal sections. Isabel spins the arrow on the spinner once.

What is the probability the arrow will land on green?

A \( \frac{5}{6} \)
B \( \frac{3}{6} \)
C \( \frac{2}{6} \)
D \( \frac{1}{6} \)

Gabe invited 4 girls and 7 boys to a party. Each of Gabe’s guests received a certain number of candy bars, \( c \). Which expression represents the total number of candy bars given to Gabe’s guests?

A \( 11c \)
B \( 28c \)
C \( 4c + 7 \)
D \( 4c \times 7c \)
5. What value of \( x \) makes the proportion below correct?

\[
\frac{x}{9} = \frac{9}{27}
\]

A 1
B 3
C 6
D 9

6. Chen records the number of crayons in her art supply box by color. The results are shown in the table below.

<table>
<thead>
<tr>
<th>Color</th>
<th>Number of Crayons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>2</td>
</tr>
<tr>
<td>Red</td>
<td>3</td>
</tr>
<tr>
<td>Yellow</td>
<td>1</td>
</tr>
<tr>
<td>Green</td>
<td>4</td>
</tr>
</tbody>
</table>

What is the ratio of the number of red crayons compared to the number of yellow crayons?

A 1:3
B 3:1
C 1:10
D 3:10
7 The diagram below shows a rectangular prism that Gayle built using blocks.

What is the volume of the rectangular prism?

A 10 cubic inches  
B 15 cubic inches  
C 30 cubic inches  
D 31 cubic inches

8 What property is shown in the equation below?

\[ 4 \times (8 \times 6) = (4 \times 8) \times 6 \]

A inverse property of multiplication  
B identity property of multiplication  
C associative property of multiplication  
D commutative property of multiplication
There are 80 sixth-grade students at Howard Elementary School. If 25% of the students have green eyes, how many sixth-grade students have green eyes?

A 16  
B 20  
C 40  
D 55

Michael plots three points on the grid below and connects the points.

What coordinates should Michael plot next if he wants to draw a parallelogram?

A (10, 2)  
B (6, 2)  
C (2, 8)  
D (2, 6)
A sixth-grade class completed a survey about favorite foods. Of the students in the class, $\frac{2}{6}$ chose hamburgers, and $\frac{3}{8}$ chose pizza. What fraction of the class chose either hamburgers or pizza as the favorite food?

A \( \frac{1}{24} \)

B \( \frac{6}{48} \)

C \( \frac{5}{14} \)

D \( \frac{17}{24} \)

The table below shows the average lengths of different types of beetles.

<table>
<thead>
<tr>
<th>Beetle Name</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacon beetle</td>
<td>8 mm</td>
</tr>
<tr>
<td>Green tiger beetle</td>
<td>16 mm</td>
</tr>
<tr>
<td>Ground beetle</td>
<td>16 mm</td>
</tr>
<tr>
<td>Rove beetle</td>
<td>8 mm</td>
</tr>
<tr>
<td>Soldier beetle</td>
<td>10 mm</td>
</tr>
<tr>
<td>Maritime beetle</td>
<td>20 mm</td>
</tr>
<tr>
<td>Green dock leaf beetle</td>
<td>6 mm</td>
</tr>
</tbody>
</table>

What is the median, in millimeters, of the data?

A 8

B 10

C 12

D 14
13 Kathy buys 6 cups of ice cream. How many pints of ice cream does Kathy buy?

\[
1 \text{ pint} = 2 \text{ cups}
\]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>6</td>
</tr>
<tr>
<td>D</td>
<td>12</td>
</tr>
</tbody>
</table>

14 Hector and his friends collect baseball cards. The number of cards in each person's collection is shown below.

\[
36, 61, 55, 72, 47, 12, 32, 44, 55
\]

What is the range of the data?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>60</td>
</tr>
<tr>
<td>B</td>
<td>55</td>
</tr>
<tr>
<td>C</td>
<td>47</td>
</tr>
<tr>
<td>D</td>
<td>46</td>
</tr>
</tbody>
</table>

15 In a sixth-grade music class, \( \frac{1}{5} \) of the class wants to play the drums. Which decimal is equivalent to \( \frac{1}{5} \)?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.02</td>
</tr>
<tr>
<td>B</td>
<td>0.15</td>
</tr>
<tr>
<td>C</td>
<td>0.2</td>
</tr>
<tr>
<td>D</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Go On
16 A hen lays an average of 5.5 eggs each week. If she lays eggs for a certain number of weeks, \( w \), which expression can be used to determine the total number of eggs she lays?

A \( 5.5 \div w \)

B \( 5.5 \div w \)

C \( 5.5 - w \)

D \( 5.5 \times w \)

17 Bobby is sorting some nails by their lengths. The lengths of the nails are \( 2 \frac{1}{2} \) inches, \( 2 \frac{3}{4} \) inches, \( \frac{3}{4} \) inch, \( 3 \frac{1}{2} \) inches, and \( 2 \frac{1}{4} \) inches. Which list of lengths is in order from **shortest** to **longest**?

A \( 2 \frac{1}{2}, 2 \frac{1}{4}, \frac{3}{4}, 3 \frac{1}{2}, 2 \frac{3}{4} \)

B \( \frac{3}{4}, 2 \frac{1}{4}, 2 \frac{1}{2}, 2 \frac{3}{4}, 3 \frac{1}{2} \)

C \( \frac{3}{4}, 2 \frac{1}{2}, 2 \frac{1}{4}, 3 \frac{1}{2}, 2 \frac{3}{4} \)

D \( 3 \frac{1}{2}, 2 \frac{3}{4}, 2 \frac{1}{2}, 2 \frac{1}{4}, \frac{3}{4} \)
On the grid below, Shina drew a diagram of a rectangular table top.

What is the perimeter, in units, of the rectangular table top?

A 10
B 12
C 20
D 24

In her garden, Rachel has a water barrel shaped like a cylinder. The radius of the barrel is 1 foot, and the height is 4 feet. What is the volume, in cubic feet, of the water barrel?

Leave your answer in terms of $\pi$.

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

A $4\pi$
B $8\pi$
C $16\pi$
D $64\pi$
20 Which expression is equivalent to $|{-11}| + |{-3}|$?

A $11 + 3$
B $11 - 3$
C $-11 + -3$
D $-11 + 3$

21 The circle below has four labeled parts.

Which part of the circle does segment U represent?

A arc
B chord
C diameter
D radius
22. Simplify the expression below.

\[ 4^3 \times 3^2 \]

A. 35  
B. 72  
C. 384  
D. 576

23. In Mr. Martin’s science class, brine shrimp are hatching in a container of 255 milliliters of salt water. How many liters of salt water are in the container?

1 liter = 1,000 milliliters

A. 0.255  
B. 2.55  
C. 2,550  
D. 25,500
25. The pictograph below shows the number of books read by sixth-grade students in four different reading classes.

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of Books</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Prior</td>
<td>10</td>
</tr>
<tr>
<td>Mr. Perez</td>
<td>20</td>
</tr>
<tr>
<td>Ms. Mills</td>
<td>10</td>
</tr>
<tr>
<td>Mr. Li</td>
<td>10</td>
</tr>
</tbody>
</table>

How many more books did the students in Mr. Perez’s class read than the students in Ms. Mills’s class?

A. $\frac{1}{2}$
B. $8\frac{1}{2}$
C. 25
D. 85

STOP