1. In the figure at right, ΔDAI is isosceles with DI = 13 and base 24. If ΔVAI ≅ ΔDAI what is the area of quadrilateral DAVI?

   a. 60     b. 75     c. 120    d. 156    e. 240

2. An experimental jet flies at a speed of 5280 miles per hour. How many miles can this jet cover in 10 seconds?

   a. 1.467    b. 8.802    c. 11.237    d. 14.667    e. 88.022

3. If the angle (not shown) where a and b intersect is three times as large as the angle (not shown) where e and b intersect, what is the value of p?

   a. 70°     b. 85°     c. 140°
   d. 160°    e. Cannot determine

4. Let ζxz be defined for all positive integer values of x as the product of all even factors of 4x. For example, ζ3ζ = 12 × 6 × 4 × 2 = 576. What is the value of ζ5ζ ?

   a. 1600    b. 6400    c. 7200    d. 8000    e. 9600

5. The chart at right shows the distribution of topics covered in a particular business text, in chapters and pages per chapter. According to the chart, how many total pages are in this text?

<table>
<thead>
<tr>
<th>Topic</th>
<th>No. of Chapters</th>
<th>No. of pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Marketing</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Public Relations</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

   a. 31    b. 39    c. 48    d. 65    e. 79
6. In the figure at right, what is the sum of $x$ and $y$?
   Note: The figure is not drawn to scale.

7. If $2^q = 8^{q-1}$, then $q =$ ?

8. If $a$ is 40 percent of 300, $b$ is 40 percent of $a$, and $c$ is 25 percent of $b$, what is $a + b + c$?

9. If $\frac{x}{4} = \frac{11}{20}$, what is the value of $x$?

10. If $\frac{3}{5}$ of $\frac{1}{3}$ is added to 5, what is the answer?

**Answers**

1. C
2. D
3. C
4. A
5. E
6. 220º
7. $q = \frac{3}{2}$
8. 180
9. $x = 2.2$
10. $5 \frac{1}{3}$