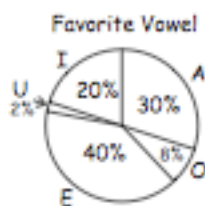





Warm-Up 1

1. _____ minutes Tom rides the bus part of the way to school and then he walks the rest of the way. He walks five minutes longer than he rides. The whole trip takes 27 minutes. For how many minutes does he walk?

2. _____ people The exact results of a survey of 1000 people are shown in the pie chart. How many more people chose A as their favorite vowel than chose U as their favorite vowel?



3. _____ seventh graders  Of the 160 students in the seventh grade at Franklin Middle School, one-half of them belong to Drama Club. Of those, only ten participate in just Drama Club, while the rest also participate in Chorus. Only 30 of the seventh graders do not participate in either Chorus or Drama Club. How many seventh graders participate in only Chorus?

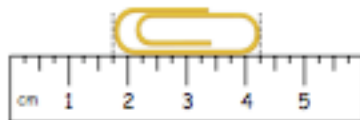
4. _____ In a race with five people, Betty finished ahead of David, and the same number of people finished before Betty that finished after David. Adam finished before Charles, and Betty finished after Edward. Who finished in 3rd place?

5. _____ paths Starting at L and proceeding downward diagonally either left or right to each subsequent letter, how many different paths spell the word LAPS?

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      L
     A A
    P P P
   S S S S
  
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6. _____ cm What is the length of the paperclip shown, in cm? Express your answer as a decimal to the nearest tenth.



7. _____ The following equation was written on the chalkboard: $\Delta + \Delta + \diamond + \varkappa - \Delta = \Omega$.

If $\Delta = 4$, $\varkappa = 3$ and $\Omega = 12$, what is the value of \diamond ?

8. _____ If each of the numbers 1, 2, 3 and 12 are used once and only once to complete the expression $\square + \square$, what is the smallest possible sum that can be obtained? Express your answer as a common fraction.

9. _____ years old John is twice as old as his son. In 42 years, the ratio of their ages will be 4:3. What is the son's current age?

10. _____ cu units A rectangle with vertices at (2, 5), (7, 5), (7, 8) and (2, 8) is revolved around the line $y = 5$ to obtain a cylinder. What is the volume of the cylinder? Express your answer in terms of π .