



JANUARY CHALLENGE



Name _____

Calculators may be used.

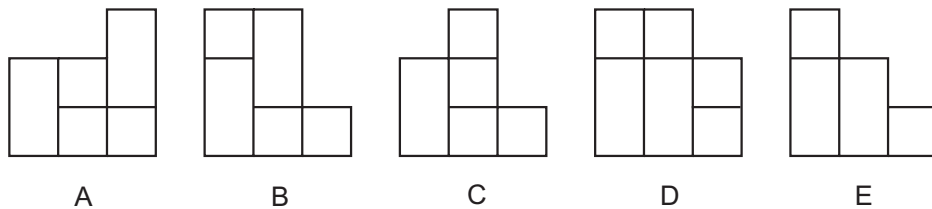
1. \$ _____ School uniforms are on sale. The \$25 pair of slacks can be purchased at a 20% discount, and the \$18 shirt can be purchased at a 25% discount. Using the sale prices, what is the total cost of three pairs of slacks and three shirts, assuming there is no sales tax?

2. _____ A collection of five positive integers has mean 4.4, unique mode 3 and median 4. If an 8 is added to the collection, what is the new median? Express your answer as a decimal to the nearest tenth.

3. _____ What is the sum of the positive integers K such that $\frac{K}{27}$ is greater than $\frac{2}{3}$ and less than $\frac{8}{9}$?

4. _____ A building modeled after the Chicago Sears Tower consists of 9 square towers arranged in a 3 by 3 grid. They have congruent bases, and the heights, in feet, are indicated in the grid to the right. Which of the following is a side view of the building from some direction?

| | | |
|-----|-----|-----|
| 100 | 200 | 100 |
| 300 | 300 | 200 |
| 200 | 200 | 100 |



5. _____ in³ What is the volume of the solid shown, in cubic inches?

