

CHAPTER 7 — Applications

A. A class at Elkhorn Middle School studying *Journeys of Discovery* decided to have a pizza party to celebrate a successful school year together. They wanted to get the most pizza for their money, so they called several shops to determine value. Here is what they found.

- Pete’s Pizza Palace offered 12 10-inch round pizzas at \$8 each.
 - Paul’s Pizza of Pisa offered 10 12-inch round pizzas at \$9 each.
 - Poppa Pietro’s Pizza offered 10 11-inch round pizzas at \$8 each.
 - Penny’s Perky Pizza offered 15 7-inch round pizzas \$7 each.
1. Which shop gives them the most pizza (in number of square inches) for the money? Use a calculator to help with the computations.
 2. Keep in mind the formula for calculating the area of a circle is $A = \pi \times r^2$

Where

A	=	Area
3.14	=	Value of π
R^2	=	Radius (half the diameter) times itself

B. Three terms used in mathematics that mean average are mean, median, and mode. However, each of these averages is different. Here are ten spelling scores in order from highest to lowest:

20 19 18 18 16 15 15 15 14 13 12

Calculate the mean, median, and mode for the spelling scores listed above.

1. To calculate the *mean* as average score, add up the *total* of the scores and divide by the *number* of scores. (15.8)
2. To calculate the *median* as average, find the *middle* score in the distribution. (15)
3. To calculate the *mode*, determine the *most common* score. (15)

C. Trees grow at different rates depending on species, climate, soils, and other factors.

1. Illustrate a chart showing the average annual rate of growth of the following trees of the Pacific Northwest: Douglas fir, cottonwood, ponderosa pine, alder, larch, and mountain ash.
2. Calculate the differences in height of each species as a mature tree.

