Workout 4

- 171. bats There are 270 bats living in a cave on the first day of June. Every day in June, some number of bats arrive to join the bats already there. At the end of June 30, there are 1000 bats in the cave. On average, how many bats arrived each day in June? Express your answer as a decimal to the nearest tenth.
- 172. <u>%</u> When first cut from a log, a wooden 2-by-4 measures 2 inches by 4 inches by 8 feet. This "rough-cut" 2-by-4 is run through a planer to make it smooth. By the time it has completed this "milling process," it measures 1.5 inches by 3.5 inches by 8 feet. At that point, what percentage of the wood is remaining? Express your answer to the nearest whole number.
- 173. <u>inches</u> A 9-inch-diameter cherry pie is cut into six congruent slices. What is the perimeter of one slice? Express your answer as a decimal to the nearest tenth of an inch.
- 174. <u>•</u> Absolute zero is the lowest possible temperature. It is equivalent to -459.67 °F on the Fahrenheit temperature scale. In degrees Fahrenheit, how many degrees is absolute zero below the freezing point of water, 32 °F? Express your answer as a decimal to the nearest hundredth.
- 175. \$ The price of a pair of shoes is reduced by 15%. Then its price is raised by 25%. The new price is \$10 higher than the original price. What was the original price?
- 176. \$ If 4 oranges cost \$1.08, how much will 11 oranges cost?
- 177. <u>minutes</u> Bob and Sam each are going to drive from Lincoln to Denver, a driving distance of 488.5 miles. Bob leaves at 6:00 a.m., traveling at an average speed of 75 mi/h. Sam leaves at 8:30 a.m., traveling at an average speed of 60 mi/h. How many minutes after Bob arrives in Denver will Sam arrive? Express your answer as a decimal to the nearest tenth.
- 178. Let  $A = \frac{3}{4} \times 50\% \times 200$ ,  $B = 0.125 \times \frac{7}{5} \times 80$  and  $C = 0.1\overline{6} \times 240 \times 25\%$ . What is the value of A B C?

In triangle ABC, shown here, segment AD bisects  $\angle A$ , AB = 30, BD = 10 and AC = 51. How many units long is side BC?

180.\_\_\_\_\_ The *strain* in a material is the quotient when the change in its length is divided by its original length. If hanging a weight from a 1-foot length of rope stretches the rope to a length of 1 foot 3 inches, what is the strain in the rope? Express your answer as a decimal to the nearest hundredth.