

UNIT 19 EXERCISES 6-10

RATIO

2010A

7. Logan is constructing a scaled model of his town. The city's water tower stands 40 meters high, and the top portion is a sphere that holds 100,000 liters of water. Logan's miniature water tower holds 0.1 liters. How tall, in meters, should Logan make his tower?

(A) 0.04 (B) $\frac{0.4}{\pi}$ (C) 0.4 (D) $\frac{4}{\pi}$ (E) 4

2008A

9. Older television screens have an aspect ratio of 4:3. That is, the ratio of the width to the height is 4:3. The aspect ratio of many movies is not 4:3, so they are sometimes shown on a television screen by "letterboxing" — darkening strips of equal height at the top and bottom of the screen, as shown. Suppose a movie has an aspect ratio of 2:1 and is shown on an older television screen with a 27-inch diagonal. What is the height, in inches, of each darkened strip?



(A) 2 (B) 2.25 (C) 2.5 (D) 2.7 (E) 3

- 2003A 10. Al, Bert, and Carl are the winners of a school drawing for a pile of Halloween candy, which they are to divide in a ratio of $3 : 2 : 1$, respectively. Due to some confusion they come at different times to claim their prizes, and each assumes he is the first to arrive. If each takes what he believes to be his correct share of candy, what fraction of the candy goes unclaimed?

(A) $\frac{1}{18}$ (B) $\frac{1}{6}$ (C) $\frac{2}{9}$ (D) $\frac{5}{18}$ (E) $\frac{5}{12}$