10 TAKS PRACTICE

PRACTICE FOR TAKS OBJECTIVE 8

1. A solid steel beam in the shape of a rectangular prism has a length of 2 feet, a width of 4 inches, and a height of $\frac{1}{2}$ inch. Find the volume of the beam.

  A 4 in.^{3}

  B 24 in.^{3}

  C 48 in.^{3}

  D 220 in.^{3}

2. Water is passing through a pipe and into a sink. The cylindrical pipe has a radius of 2 centimeters. Every second, the water travels 12 centimeters through the pipe. What volume of water empties into the sink every second?

  F 24π cm^3

  G 48π cm^3

  H 56π cm^3

  J 64π cm^3

3. A piece of marble is carved into the shape of a pyramid with a square base, a height of 4 meters, and a base length of 6 meters. The marble weighs about 2500 kilograms per cubic meter. How much does the entire pyramid weigh?

  A 40,000 kg

  B 100,000 kg

  C 120,000 kg

  D 360,000 kg

4. The average raindrop in a recent storm was a sphere with a radius of about 4 millimeters. A cylindrical cup that was left outside filled with rain during the storm. The cup has a radius of 2 centimeters and a height of 10 centimeters. About how many raindrops filled the cup?

  F 147

  G 469

  H 1473

  J 468,750

5. A piece of wire is 144 centimeters long. The wire is cut into equal lengths and the pieces are soldered together to form the edges of a cube. What is the volume of the cube?
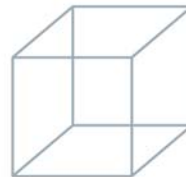
  A 144 cm^3

  B 576 cm^3

  C 1728 cm^3

  D 13,824 cm^3

MIXED TAKS PRACTICE

6. Which of the following situations can NOT be modeled using a linear equation? *TAKS Obj. 3*

  F A store sells ice cream cones for $1.25. How many ice cream cones can you buy for x dollars?

  G A car travels at an average rate of 55 miles per hour. How long will it take the car to travel x miles?

  H A store sells twice as many sneakers as it does dress shoes. The store sells x dress shoes. How many sneakers does it sell?

  J The population in a town increases 125% every decade. What will the population be in x years?

7. Your friend believes that $y^2 + x^2$ is positive. Which pair of values for x and y could you use to disprove your friend's theory? *TAKS Obj. 10*

  A $x = -3$ and $y = 1$

  B $x = -1$ and $y = 2$

  C $x = -2$ and $y = 0$

  D $x = 0$ and $y = 0$