MIXED REVIEW FOR TEKS

Lessons 8.4–8.6

MULTIPLE CHOICE

1. **TRAVEL** A car travels 120 miles in the same amount of time that it takes a truck to travel 100 miles. The car travels 10 miles per hour faster than the truck. Use the verbal model to find the speed of the truck. *TEKS 2A.10.F*

   $$\frac{\text{Distance for car}}{\text{Speed of car}} = \frac{\text{Distance for truck}}{\text{Speed of truck}}$$

   (A) 40 miles/hour

   (B) 50 miles/hour

   (C) 55 miles/hour

   (D) 60 miles/hour

2. **RIVER CURRENT** The speed of a river's current is 3 miles per hour. You travel 2 miles with the current and then return to where you started in a total time of 1.25 hours. What is your approximate speed in still water? *TEKS 2A.10.F*

   (F) 3.0 miles/hour

   (G) 3.9 miles/hour
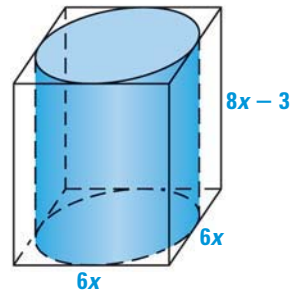
   (H) 5.0 miles/hour

   (J) 5.5 miles/hour

3. **CYCLING** A cyclist travels 50 miles from her home to a state park at a speed of *s* miles per hour. On the return trip, she increases her speed by 5 miles per hour. Which expression represents the *total* time of the cyclist's round trip? *TEKS 2A.10.F*

   (A) $100s + 250$

   (B) $\dfrac{2s + 5}{50}$

   (C) $\dfrac{250}{s^2 - 5s}$

   (D) $\dfrac{100s + 250}{s^2 + 5s}$

4. **ALLOYS** Brass is an alloy composed of 55% copper and 45% zinc by weight. You have 25 ounces of copper. About how many ounces of zinc do you need to make brass? *TEKS 2A.10.F*

   (F) 20.45 ounces

   (G) 22.73 ounces
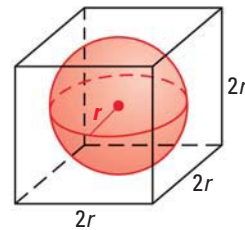
   (H) 25.45 ounces

   (J) 30.56 ounces

5. **GEOMETRY** In simplest form, what is the ratio of the volume of the rectangular prism to the volume of the inscribed cylinder? *TEKS 2A.10.B*

   $8x - 3$
   $6x$
   $6x$

   (A) $\dfrac{\pi}{4}$

   (B) $\dfrac{4}{\pi}$

   (C) π

   (D) $\dfrac{12}{\pi}$

GRIDDED ANSWER ⓪①●③④⑤⑥⑦⑧⑨

6. **GEOMETRY** Find the ratio of the volume of the sphere to the volume of the cube.

   $2r$
   r
   $2r$
   $2r$

   Use the formula $V = \frac{4}{3}\pi r^3$ for the volume of a sphere and the formula $V = s^3$ for the volume of a cube where *r* is the radius of the sphere and *s* is the side length of the cube. Write your answer as a decimal rounded to the nearest hundredth. *TEKS 2A.10.B*