

MTEL REVIEW, FALL 2014
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MTEL PRACTICE - 5 QUESTION QUIZ

(1) In the number 2530, the value represented by the digit 3 is what fraction of the value represented by the digit 5?

(A) $\frac{3}{5}$

(B) $\frac{3}{50}$

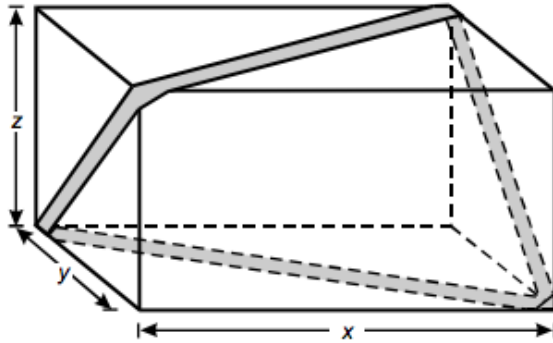
(C) $\frac{3}{500}$

(D) $\frac{3}{5000}$

- (2) Which of the following are word problems for $\frac{1}{2} + \frac{1}{3}$?
- (I) Bob pours $\frac{1}{2}$ cup of water into a pot, then pours another $\frac{1}{3}$ cup of water into the pot. How much water is there altogether in the pot?
 - (II) $\frac{1}{2}$ of the land in Durham county is covered with forest, and $\frac{1}{3}$ of the land in neighboring Orange county is covered with forest. What fraction of the two-county Durham-Orange county region is covered with forest?
 - (III) $\frac{1}{2}$ of the children in a school like to have pizza for lunch. Of the remaining students, $\frac{1}{3}$ like to have hamburger for lunch. What fraction of the students at the school like to have either pizza OR hamburger for lunch?
 - (IV) Jane has a bunch of chocolate bars, all the same size. Jane gives $\frac{1}{2}$ of a chocolate bar to Joe. Then Jane gives $\frac{1}{3}$ of a different chocolate bar to Locke. What total fraction of a chocolate bar has Jane given away?
- (A) All of them.
- (B) I, III, and IV
- (C) I and IV
- (D) II, III, and IV

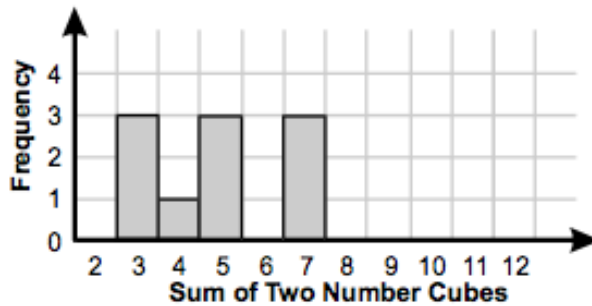
- (3) You are told that a rectangle has a width of 2 inches and a length of 6 inches, where each measurement is rounded to the nearest whole number. Which of the following is a possible value of A , where A is the area of the rectangle?
- (A) 7.5 square inches
 - (B) 8 square inches
 - (C) 16 square inches
 - (D) 16.5 square inches

- (4) Use the diagram below to answer the question that follows.



A gift box has dimensions x by y by z . A decorative ribbon is wrapped across the diagonals of the box as shown above. Which of the following expressions represents the approximate total length of the ribbon?

- (A) $2(\sqrt{xy} + \sqrt{yz})$
 (B) $2(\sqrt{xy} + \sqrt{yz} + \sqrt{zx})$
 (C) $2(\sqrt{x^2 + y^2} + \sqrt{y^2 + z^2})$
 (D) $2(\sqrt{x^2 + y^2} + \sqrt{y^2 + z^2} + \sqrt{z^2 + x^2})$
- (5) Use the histogram below to answer the question that follows.



Two 6-sided number cubes are rolled simultaneously 10 times. The sums are recorded in the histogram shown above. Which of the following statements can be inferred from the histogram?

- (A) The mean is less than the median by $\frac{1}{10}$.
 (B) The mean is greater than the median by $\frac{1}{10}$.
 (C) The mean is less than the median by $\frac{1}{2}$.
 (D) The mean is greater than the median by $\frac{1}{2}$.