SAMPLES OF STANDARDS STUDENTS ARE LEARNING THIS NINE WEEKS:

5th Grade Math

STANDARDS: 5.NF.4a, 5.NF.5a, 5.NF.5b, 5.NF.6, 5.NF.7b, 5.MD.1, 5.MD.3, 5.MD.5a

5.NF.4a: Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q y b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)

Part A

What is $\frac{3}{4}$ of 96?

A 48

B 72

C 108

D 128

Answer B is correct.

Part B

What is $\frac{4}{10} \times \frac{7}{5}$?

A $\frac{20}{70}$

B $\frac{9}{17}$

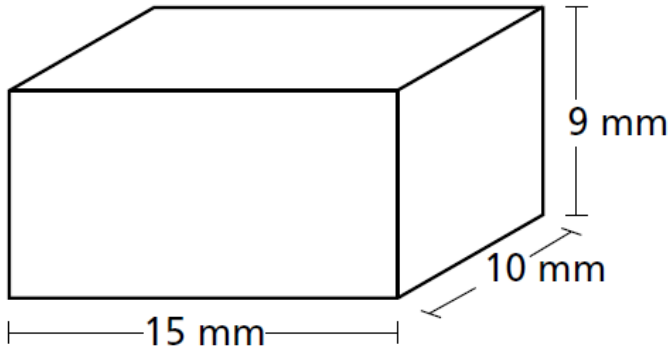
C $\frac{28}{50}$

D $\frac{11}{15}$

Answer C is correct.

5.MD.5a: Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

A rectangular prism is shown below.



[not drawn to scale]

Part A

Which **three** expressions can be used to find the greatest number of 1-millimeter unit cubes that could be packed into the prism?

A 150×9

B 135×10

C 100×19

D 90×15

E 19×15

Answers A, B, and D are correct.

Part B

What is the volume of the prism?

A 225 mm^3

B 285 mm^3

C 1,350 mm^3

D 1,500 mm^3

Answer C is correct.

5.NF.5a: Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

Which **two** statements are true?

A $\frac{2}{7} \times \frac{3}{8} < \frac{3}{8}$ because $\frac{2}{7} < 1$

B $\frac{2}{7} \times \frac{3}{8} > \frac{3}{8}$ because $\frac{2}{7} > 1$

C $\frac{2}{7} \times \frac{3}{8} < \frac{2}{7}$ because $\frac{3}{8} > 1$

D $\frac{2}{7} \times \frac{3}{8} < \frac{2}{7}$ because $\frac{3}{8} < 1$

E $\frac{2}{7} \times \frac{3}{8} > \frac{2}{7}$ because $\frac{3}{8} < 1$

Answers A and D are correct.

5.NF.6: Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

A rectangular tile is $2\frac{1}{3}$ times as wide as it is tall. If the tile is $\frac{3}{4}$ inch tall, how wide is it?

A $1\frac{3}{4}$ in.

B $2\frac{4}{7}$ in.

C $3\frac{1}{12}$ in.

D $3\frac{1}{9}$ in.

Answer A is correct.

5.NF.5b: Interpret multiplication as scaling (resizing), by: b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n × a)/(n × b) to the effect of multiplying a/b by 1.

Which expression has a value equivalent to the product $\frac{7}{11} \times 1$?

A $\frac{7+3}{11+3}$

B $\frac{7 \div 7}{11 \div 11}$

C $\frac{7 \times 3}{11 \times 3}$

D $\frac{7-3}{11-3}$

Answer C is correct.

5.NF.7b: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.

Which situation can be modeled by the expression $4 \div \frac{1}{3}$?

A Beni separates 4 quarts of paint into 3 equal jars.

B Beni puts $\frac{1}{3}$ quart of paint in each of 4 jars.

C Beni has 4 quarts of paint and puts $\frac{1}{3}$ quart into a jar.

D Beni fills as many $\frac{1}{3}$-quart jars as he can with 4 quarts of paint.

Answer D is correct.

5.MD.1: Convert among different-sized standard measurement units within a given measurement system (customary and metric) (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

There are 1,000 meters in 1 kilometer. How many kilometers are in 3,600 meters?

A 3.6 kilometers

B 36 kilometers

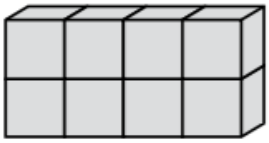
C 360,000 kilometers

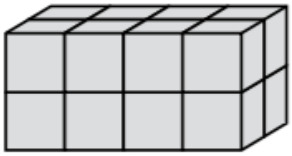
D 3,600,000 kilometers

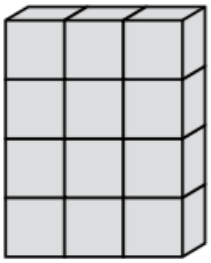
Answer A is correct.

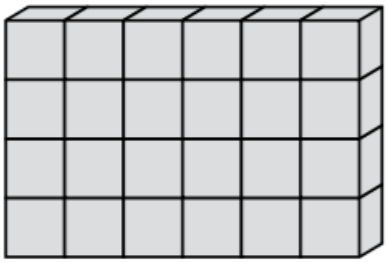
5.MD.3: Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

John builds a rectangular prism that has a volume of 12 cubic units. Which rectangular prism could be John's prism?

A 

C 

B 

D 

Answer B is correct.