TNReady
Sample Items
Math (Grades K-8)

SAGE Math Sample Items
Grades 3-5

Multiple Choice

Grade 3/4 Training Test #2

Which decimal is greater than 0.8?

Ⓐ 0.70

Ⓑ 0.75

Ⓒ 0.80

● 0.85

Grade 5/6 Training Test #19

An expression is given in words.

Add seven and seven, then multiply by seven, then divide by seven.

Which numeric expression is equivalent to the one given?

Ⓐ $7 + 7 \times 7 \div 7$

Ⓑ $7 \times 7 + 7 \div 7$

Ⓒ $(7 \times 7 + 7) \div 7$

● $7 \times (7 + 7) \div 7$

Multiple Select

Grade 3/4 Training Test #8

Select all the expressions that have a value of 48.

- ☐ $(3+3)\times 8$
- ☐ $3+(3\times 8)$
- ☐ $6\times 4+4$
- ☐ $6\times(4+4)$
- ☐ 8×40

Grade 5/6 Training Test #19

Consider the family of quadrilaterals that includes parallelograms, rectangles, squares, and rhombuses. Select all the statements about these quadrilaterals that are true.

- ☐ Squares are always rectangles.
- ☐ Rectangles are always squares.
- ☐ Rhombuses are always squares.
- ☐ Squares are always rhombuses.
- ☐ Rhombuses are always parallelograms.
- ☐ Rhombuses are sometimes rectangles.

Short Answer

Grade 3/4 Training Test #17

Describe what an equilateral triangle is.

Type your answer in the space provided.

Grade 5/6 Training Test #23 (NOTE: Grade 6 content)

The base and height of a triangle are each equal to the side length of a square.

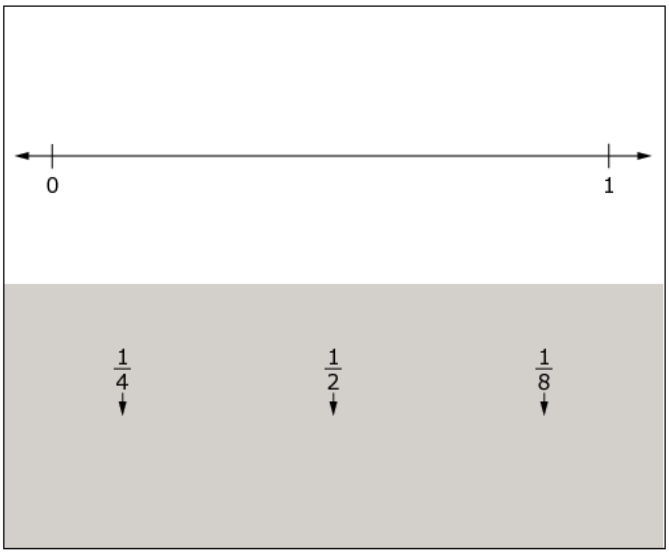
How does the area of the triangle relate to the area of the square?

Type your answer in the space provided.

Graphic Response

Grade 3/4 Training Test #7

Drag the fractions to the number line.



Grade 5/6 Training Test #21

21

Two fractions have a sum of $\frac{1}{3}$.

The denominators of the two fractions are different.

Drag numbers to the boxes to show an equation that meets these conditions.

0
1
2
3
4
5
6
7
8
9

Delete

Fraction Equation

$\frac{\square}{\square} + \frac{\square}{\square} = \frac{1}{3}$

Select an object to remove.

Equation Response

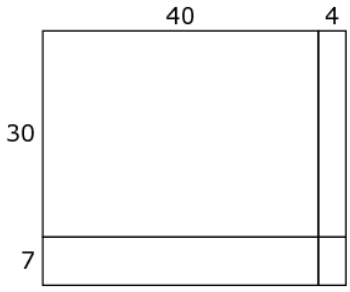
Grade 3/4 Training Test #4

A bakery uses 48 pounds of flour each day. It orders flour every 28 days.

Create an equation that shows how many pounds of flour the bakery needs to order every 28 days.

Grade 3/4 Training Test #11

An area model is shown.



- Create a multiplication expression that you could use to find the area of this model.
- What is the total area, in square units, of the model?

Enter each answer on a separate line.

Mathematics | Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).

1 Make sense of problems and persevere in solving them.
Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.
Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.
Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions,