Study Guide

Field 221: Multi-Subject: Teachers of Childhood (Grade 1–Grade 6)
Part One: Literacy and English Language Arts

Sample Selected-Response Questions

Competency 0001
Knowledge of Literacy and Language Arts

1. Which factor is most frequently the underlying cause of children's early difficulty in learning to read?

1. limited general background knowledge
2. weak phonological processing skills
3. immature knowledge of syntax
4. poor visual acuity

Competency 0001
Knowledge of Literacy and Language Arts

2. **Read the passage below from *The Phantom Tollbooth*, a novel by Norton Juster; then answer the question that follows.**

Milo walked slowly down the long hallway and into the little room where the Soundkeeper sat listening intently to an enormous radio set, whose switches, dials, knobs, meters, and speaker covered one whole wall, and which at the moment was playing nothing.

"Isn't that lovely?" she sighed. "It's my favorite program—fifteen minutes of silence—and after that there's a half hour of quiet and then an interlude of lull. Why, did you know that there are almost as many kinds of stillness as there are sounds? But, sadly enough, no one pays any attention to them these days.

"Have you ever heard the wonderful silence just before the dawn?" she inquired. "Or the quiet and calm just as a storm ends? Or perhaps you know the silence when you haven't the answer to a question you've been asked, or the hush of a country road at night, or the expectant pause in a roomful of people when someone is just about to speak, or, most beautiful of all, the moment after the door closes and you're all alone in the whole house? Each one is different, you know, and all very beautiful, if you listen carefully."[1]

In the passage, a series of questions is used primarily to:

1. highlight the imaginary setting's blend of fantasy and reality.
2. characterize the Soundkeeper as overly curious and rude.
3. reveal the hidden motivation for Milo's visit to the little room.
4. suggest that the world abounds with unheard experiences.

Competency 0002
Instruction in Foundational Literacy Skills

3. As an integral part of planning reading instruction, a fifth-grade teacher provides students with opportunities to interact with objects or illustrations related to important content in planned texts. For example, during an earth science unit, before students read an informational passage about the effects of pollution on the ecosystem of a vernal pool, the teacher arranges a guided class visit to a vernal pool in the area. Which statement best explains a research-based rationale for this practice?

1. Literacy activities that appeal to multiple intelligences promote the reading motivation of all students.
2. Multisensory approaches are effective for reinforcing print-based skills.
3. A text-rich environment plays an important role in the literacy development of elementary readers.
4. Background knowledge is an important factor in reading comprehension.

Competency 0002
Instruction in Foundational Literacy Skills

4. A fourth-grade student struggles with literal and inferential comprehension of complex grade-level texts. The teacher has determined that the student meets benchmark oral fluency expectations and has at-grade-level vocabulary and spelling skills. Given this information, which method would be most appropriate for the teacher to use to promote the student's comprehension skills?

1. selecting texts for the student that follow the compare/contrast organizational style
2. having the student write down unfamiliar words from the texts, and then look up the words' meanings

3. modeling think-aloud and brainstorming strategies to help the student activate prior knowledge
4. assigning the student to take notes, and then write text summaries independently

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Competency 0003
Instruction in English Language Arts

5. Students in a sixth-grade class are preparing to read Laurence Yep's novel *Dragonwings*, in which the narrator leaves his home in China as a young boy to join his father in California. Over the course of the novel, the father and son confront racial prejudice, experience the 1906 San Francisco earthquake, and forge a friendship. Before students begin the novel, they write in their reading journals about a time when they felt like strangers in a strange land. The assignment will most likely enhance students' ability to:

1. visualize the novel's characters and setting.
2. draw conclusions about the novel's central themes.
3. predict events that lead to the novel's climax.
4. understand the perspective of the novel's narrator.

Competency 0003
Instruction in English Language Arts

6. While reading aloud a story to first-grade students, a teacher pauses periodically to make statements about the content of the story. Students respond to each statement nonverbally by raising one finger to indicate agreement and two fingers to indicate disagreement. Which additional action by the students would best help the teacher assess their active listening skills?

1. tallying responses on the whiteboard during the read-aloud
2. citing evidence to support responses during the read-aloud
3. acting out a key scene from the story after the read-aloud
4. composing a new ending for the story after the read-aloud

Study Guide

Field 222: Multi-Subject: Teachers of Childhood (Grade 1– to Grade 6)
Part Two: Mathematics

Sample Selected-Response Questions

Competency 0001
Number and Operations

1. A bag contains a number of plastic disks that are either red, green, or blue. One-quarter of the disks are red and two-thirds of the disks are green. Which is a possible value for the number of disks in the bag that are either red or green?

1. 18
2. 36
3. 42
4. 88

Competency 0001
Number and Operations

2. What is the solution set of the system of linear equations below?

$3x + y = \frac{3}{2}$ 3 x plus y equals 3 halves

$x + y = 2$ x plus y equals 2

1. $\left(\frac{1}{4}, \frac{9}{4}\right)$ open paren 1 fourth comma 9 fourths close paren
2. $\left(-\frac{1}{4}, \frac{9}{4}\right)$ open paren negative 1 fourth comma 9 fourths close paren
3. $\left(\frac{5}{4}, \frac{9}{4}\right)$ open paren 5 fourths comma 9 fourths close paren
4. $\left(-\frac{5}{4}, \frac{9}{4}\right)$ open paren negative 5 fourths comma 9 fourths close paren

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Competency 0001
Number and Operations

3. Given that *a*, *b*, *c*, and *d* are all negative integers, which statement is true?

1. $\frac{a+b}{a+c} = \frac{b}{c}$ the quantity a plus b over the quantity a plus c equals b over c
2. $\frac{a}{b} - \frac{c}{d} = \frac{a-c}{b-d}$ a over b minus c over d equals the quantity a minus c over the quantity b minus d
3. $\frac{a}{c} \div \frac{b}{d} = \frac{a \div b}{c \div d}$ a over c divided by b over d equals the quantity a divided by b over the quantity c divided by d
4. $a \bullet \frac{b}{c} = \frac{a \bullet b}{a \bullet c}$ a times b over c equals the quantity a times b over the quantity a times c

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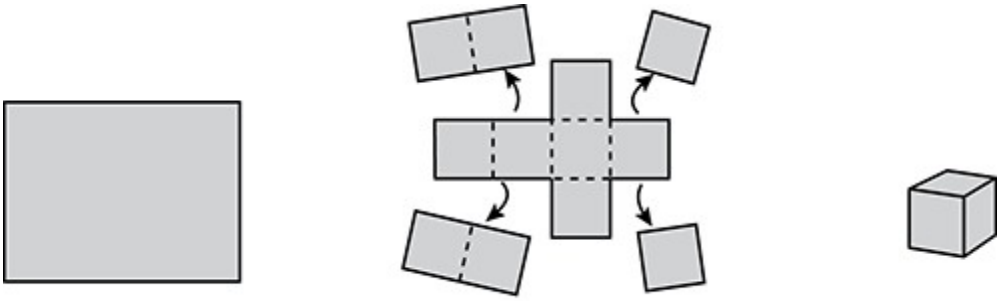
Competency 0002
Ratios and Proportional Relationships and Number Systems

4. **Use the diagram below to answer the question that follows.**



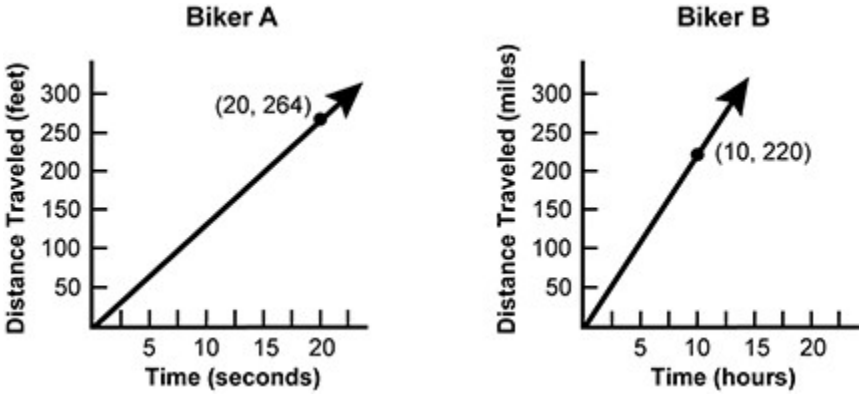
step one is one large rectangle that is wider then tall step two shows the pieces that are removed to create a pattern for a box taking the original large rectangle and separating it into twelve equas squares with four columns and three rows you would remove the two top left squares and the two bottom left squares you would also remove the top right square and the bottom right square step three shows the box that was created by folding what was left in step two.

The steps for making a cube-shaped box by cutting and folding a rectangular piece of paper are shown in the diagram. If all the small squares shown in step 2 are congruent and the volume of the box produced in step 3 is 216 cubic units, what is the area of the rectangular sheet of paper in step 1?

1. 72 square units
2. 144 square units
3. 432 square units
4. 864 square units

Competency 0002
Ratios and Proportional Relationships and Number Systems

5. **Use the graphs below to answer the question that follows.**



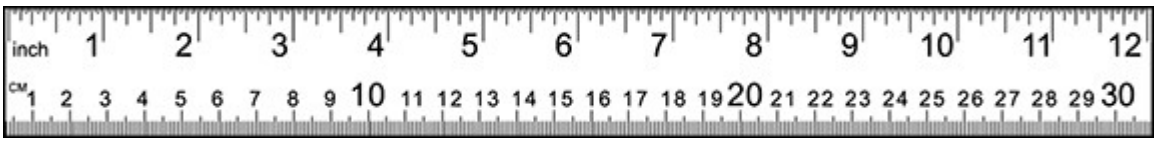
Two graphs are shown. One graph is titled Biker A and the other graph is titled Biker B. On the graph titled Biker A, the x axis is labeled time open paren seconds close paren and has evenly distributed tick marks labeled 5, 10, 15, 20. The y axis is labeled distance travelled open paren feet close paren and has evenly distributed tick marks labeled 50, 100, 150, 200, 250, 300. The graph titled Biker A has a straight line that starts at 0 comma 0 and passes through a point labeled 20 comma 264. On the graph titled Biker B, the x axis is labeled time open paren hours close paren and has evenly distributed tick marks labeled 5, 10, 15, 20. The y axis is labeled distance travelled open paren miles close paren and has evenly distributed tick marks labeled 50, 100, 150, 200, 250, 300. The graph titled Biker B has a straight line that starts at 0 comma 0 and passes through a point labeled 10 comma 220.

Based on the information shown in the graphs, which value is closest to the difference in miles per hour between the speeds of the two bikers?

1. 8.8 mph miles per hour
2. 10.2 mph miles per hour
3. 13.0 mph miles per hour
4. 19.0 mph miles per hour .

Competency 0003
Algebra, Measurement, Geometry, and Data

6. **Use the diagram below to answer the question that follows.**



Which expression can be used to estimate the number of feet in 2 kilometers?

1. $\frac{1000 \times 100 \times 2}{2 \times 5 \times 12}$ feet start fraction numerator one thousand times one hundred times two denominator two times five times twelve end fraction feet
2. $\frac{2 \times 1000 \times 2}{5 \times 12 \times 100}$ feet start fraction numerator two times one thousand times two denominator five times twelve times one hundred end fraction feet
3. $\frac{2 \times 1000 \times 100 \times 2}{5 \times 12}$ feet start fraction numerator two times one thousand times one hundred times two denominator five times twelve end fraction feet
4. $\frac{1000 \times 100}{2 \times 5 \times 12 \times 2}$ feet start fraction numerator one thousand times one hundred denominator two times five times twelve times two end fraction feet

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Competency 0003
Algebra, Measurement, Geometry, and Data

7. **Use the system of equations below to answer the question that follows.**

$-2x + 3y = 8$ negative 2 x plus 3 y equals 8
$7x - 6y = -2$ 7 x minus 6 y equals negative 2

Which equation is a step in solving the system for x by using elimination?

1. $3x = 6$ 3 x equals 6
2. $3x = 14$ 3 x equals 14
3. $11x = -18$ 11 x equals negative 18
4. $11x = -10$ 11 x equals negative 10

Competency 0003
Algebra, Measurement, Geometry, and Data

8. **Use the table below to answer the question that follows.**

x	$f(x)$ f of x
–negative2	–negative1
–negative1	0
0	2
1	4
2	8
3	5
4	–negative2

A partial table of the function $f(x)$ f of x is shown. What is the value of $^{-f(1) + 2f(2)}_{f}{}^{-1}(-2)$ the quantity negative f of 1 + 2 f of 2 all over f inverse of negative 2 ?

1. 3
2. 4
3. 6
4. 12

Competency 0004
Instruction in Mathematics

9. A third-grade teacher is preparing to teach the following standard from the New York State Learning Standards for Mathematics.[1] footnote 1

Number & Operations—Fractions (NY-3.NF)

Develop understanding of fractions as numbers.

3. Explain equivalence of fractions, and compare fractions by reasoning about their size.

Which strategy is likely to be most effective as part of an introductory lesson designed to meet this standard?

1. teaching that $^{1}_{3}$ one third is equivalent to $^{2}_{6}$ two sixths by showing how they represent the same point on a number line

2. teaching that $^{1}_{3}$ one third is equivalent to $^{2}_{6}$ two sixths because $^{1}_{3} \times {}^{2}_{2} = {}^{2}_{6}$ one third times two halves equals two sixths according to the rules of fractions
3. teaching that $^{1}_{3}$ one third is equivalent to $^{2}_{6}$ two sixths because 6 is the least common denominator of 2 and 3
4. teaching that $^{1}_{3}$ one third is equivalent to $^{2}_{6}$ two sixths by showing cross multiplication of 1 x 6 = 2 x 3 1 times 6 equals 2 times 3

Competency 0004
Instruction in Mathematics

10. Which activity would best help a first-grade student develop a background for understanding congruence?

1. composing and decomposing plane figures into composite figures
2. recognizing figures from different perspectives and orientations
3. determining the measurable attributes of objects
4. modeling two-dimensional shapes by drawing