



SAMPLE ASSESSMENT ITEMS

MATHEMATICS • GRADE 5

UNIT 2

DIRECTIONS

Read each sample item below and then complete the following for each item.

- Identify the Standard and element.
- Find the correct response.
- Determine the Depth of Knowledge (DOK) level. (See attached DOK guidance sheet.)
- Reflect on the item.
 - What are the item's strengths/weaknesses?
 - How will your students respond/why?
 - How well does it assess the standard/element?
 - Other comments/questions?

UNIT 2 STANDARDS AND ELEMENTS

M5N2. Students will further develop their understanding of decimals as part of the base-ten number system.

- a. Understand place value.
- b. Analyze the effect on the product when a number is multiplied by 10, 100, 1000, 0.1, 0.01, and 0.001.
- c. Use $<$, $>$, or $=$ to compare decimals and justify the comparison.

M5N3. Students will further develop their understanding of the meaning of multiplication and division with decimals and use them.

- a. Model multiplication and division of decimals.
- b. Explain the process of multiplication and division, including situations in which the multiplier and divisor are both whole numbers and decimals.
- c. Multiply and divide with decimals including decimals less than one and greater than one.
- d. Understand the relationships and rules for multiplication and division of whole numbers also apply to decimals.

1. Melissa worked on a subtraction problem. When she rounded each number to the nearest whole number the difference of the two numbers was 8.

Which of the following could be Melissa's subtraction problem?

- A. $24.89 - 16.16$
- B. $24.89 - 16.38$
- C. $24.89 - 17.16$
- D. $24.89 - 16.68$

2. The table shows the distances four balls rolled off a ramp.

| Distances Balls Rolled | |
|-------------------------------|---------------------------------|
| Ball | Distance (in meters) |
| 1 | 10.002 |
| 2 | 10.203 |
| 3 | 10.15 |
| 4 | 10.23 |

Which of the following inequality statements shows the distances in order from least to greatest?

- A. $10.002 < 10.203 < 10.15 < 10.23$
- B. $10.15 < 10.23 < 10.203 < 10.002$
- C. $10.002 < 10.203 < 10.23 < 10.15$
- D. $10.002 < 10.15 < 10.203 < 10.23$

3. Which of the following is equivalent to the expression below?

$$(2 \times 1) + (7 \times 0.1) + (5 \times 0.001)$$

- A. 2.705
- B. 2.750
- C. 20.75
- D. 27.50

4. In the 1988 Olympic Games, Florence Griffith Joyner of the United States set an Olympic record for the women's 100-meter dash. Her time was ten and sixty-two hundredths seconds. How is this time written as a number?

- A. 1.62 seconds
- B. 10.62 seconds
- C. 100.62 seconds
- D. 1062.00 seconds

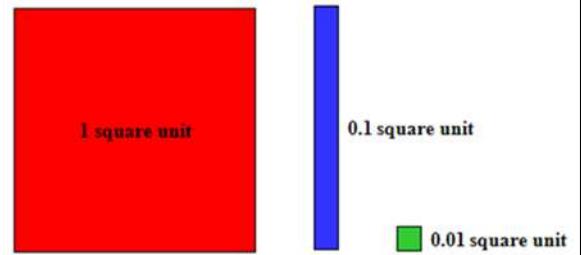
5. Miguel opened his piggy bank. He counted all of his dimes and found he had \$32.40.

How many dimes does he have?

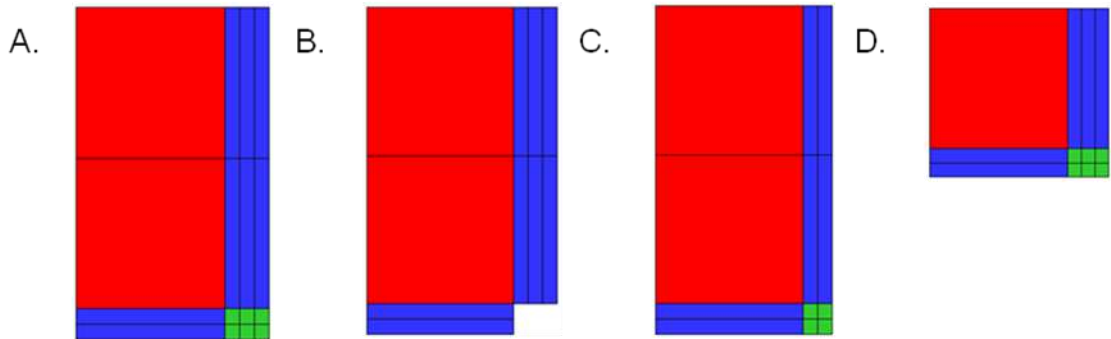
- A. 32
- B. 320
- C. 324
- D. 3,240

6.

Look at the value of each block.



Which model below represents 1.3×2.2 ?



7.

Yuki multiplied 0.12×0.3 and found the answer 0.36.

Is Yuki's answer correct? Explain how you know.

- A. Yes, because if $12 \times 3 = 36$, then $0.12 \times 0.3 = 0.36$
- B. Yes, because one hundredth times one tenth equals one hundredth and the answer 36 hundredths.
- C. No, because if $12 \times 3 = 36$, then $0.12 \times 0.3 = 0.360$.
- D. No, because one hundredth times one tenth equals one thousandth but the answer is 36 hundredths.

8. Sam used the distributive property to find the product for the following problem.

$$0.26 \times 0.8 =$$

Which expression below is NOT equivalent to $0.26 \times 0.8 = ?$

- A. $(0.2 \times 0.8) + (0.06 \times 0.8)$
 - B. $(0.25 \times 0.8) + (0.01 \times 0.8)$
 - C. $(0.26 \times 0.4) + (0.26 \times 0.4)$
 - D. $(0.26 \times 0.8) + (0.26 \times 0.1)$
9. A package of birdseed costs \$2.58 for 2 pounds. A package of sunflower seeds costs \$3.72 for 3 pounds. What is the difference in the cost per pound?

- A. \$0.05
- B. \$1.14
- C. \$1.24
- D. \$1.29

10. Rico bought 10 cards, which cost \$12.20 before tax. How many packages of each type did he buy?

_____ Packages of postcards

_____ Packages of greeting cards



Explain how you know your answer is correct.

Rico said that one postcard is cheaper than one greeting card. Show that Rico is correct.

11. Janet’s family is taking a weekend trip to the mountains. Janet’s family car gets 23.4 miles per gallon of gasoline. Use the table to determine how many gallons of gasoline will be used to drive to Blue Ridge, GA.

| Mountain Destinations | Distance from Janet’s Home |
|-----------------------|----------------------------|
| Trenton | 256.83 miles |
| Blue Ridge | 212.94 miles |
| Helen | 208.69 miles |

- A. 0.91
- B. 9.1
- C. 91
- D. 910

Assessment items published in *Sample Assessment Items: Grade 5 Mathematics Unit 2* are for classroom use only.

References

- Massachusetts Department of Education
- Virginia Department of Education
- Florida Department of Education
- California Department of Education
- Government of Newfoundland and Labrador
- National Assessment of Educational Progress (NAEP)
- Centre for Innovation in Mathematics Teaching (Mathematics Enhancement Programme)
- SAT Subject Tests