

# MODULE 3, TOPIC 1 ASSESSMENT SCORING GUIDE

## 1 Operating with Rational Numbers

### Numbers and Operations

1 DAY PACING = 45-MINUTE SESSION

The student is expected to:

7.2A extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers.

7.3A add, subtract, multiply, and divide rational numbers fluently.

7.3B apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.

Question Number	TEKS*	Point Value	Scoring Guidance
1	7.3A	1	<ul style="list-style-type: none"> <li>The student selects the correct answer (1 point)</li> <li>The student does not select the correct answer (0 points)</li> </ul>
2	7.2A	1	<ul style="list-style-type: none"> <li>The student selects the correct answer (1 point)</li> <li>The student does not select the correct answer (0 points)</li> </ul>
3	7.2A	2	<ul style="list-style-type: none"> <li>The student identifies all of the correct sections. (2 points)</li> <li>The student identifies some of the correct sections. (1 point)</li> <li>The student does not identify any of the correct sections (0 points)</li> </ul>
4	7.3A	1	<ul style="list-style-type: none"> <li>The student determines the correct value. (1 point)</li> <li>The student does not determine the correct value. (0 points)</li> </ul>
5	7.3A	1	<ul style="list-style-type: none"> <li>The student determines the correct product. (1 point)</li> <li>The student does not determine the correct product. (0 points)</li> </ul>
6	7.3A	2	<ul style="list-style-type: none"> <li>The student determines the correct number of slices and the correct number of inches left over. (2 points)</li> <li>The student determines the correct number of slices or the correct number of inches left over. (1 point)</li> <li>The student does not determine the correct number of slices, nor the correct number of inches left over. (0 points)</li> </ul>
7	7.3B	2	<ul style="list-style-type: none"> <li>The student determines the correct cost and gives a logical explanation. (2 points)</li> <li>The student determines the correct cost or gives a logical explanation. (1 point)</li> <li>The student does not determine the correct cost nor gives a logical explanation. (0 points)</li> </ul>

\*Bold TEKS = Readiness Standard

Question Number	TEKS*	Point Value	Scoring Guidance
8	7.3B	1	<ul style="list-style-type: none"> <li>The student determines the correct distance. (1 point)</li> <li>The student does not determine the correct distance. (0 points)</li> </ul>
9	7.3B	1	<ul style="list-style-type: none"> <li>The student determines the correct amount. (1 point)</li> <li>The student does not determine the correct amount. (0 points)</li> </ul>
10	7.3B	1	<ul style="list-style-type: none"> <li>The student selects the correct answer (1 point)</li> <li>The student does not select the correct answer (0 points)</li> </ul>
11	7.3A	1	<ul style="list-style-type: none"> <li>The student determines the correct value. (1 point)</li> <li>The student does not determine the correct value. (0 points)</li> </ul>

\*Bold TEKS = Readiness Standard

### Response to Student Performance

TEKS*	Question(s)	Recommendations
7.2A	2, 3	<p>To support students:</p> <ul style="list-style-type: none"> <li>Review the definitions of integer, natural, rational, and whole numbers..</li> <li>Use Skills Practice Set I.A for additional practice.</li> </ul>
7.3A	4, 5, 6	<p>To support students:</p> <ul style="list-style-type: none"> <li>Use Skills Practice Sets II.A and II.B for additional practice.</li> <li>Review Lesson 2 Talk the Talk.</li> </ul> <p>To challenge students:</p> <ul style="list-style-type: none"> <li>Extend student knowledge with Skills Practice Extension Set II.</li> </ul>
	1	<p>To support students:</p> <ul style="list-style-type: none"> <li>Use Skills Practice Set III.A for additional practice.</li> <li>Review Lesson 3 Assignment Practice Question 4.</li> </ul>
	11	<p>To support students:</p> <ul style="list-style-type: none"> <li>Use Skills Practice Set IV.B for additional practice.</li> <li>Review Lesson 4 Assignment Practice Questions 5 and 6.</li> </ul>
7.3B	7, 8, 9, 10	<p>To support students:</p> <ul style="list-style-type: none"> <li>Use Skills Practice Set III.A for additional practice.</li> <li>Review Lesson 3 Assignment Practice Questions 1-3.</li> </ul>

**NOTE:** Both teachers and administrators should refer to the Assessment Guidance and Analysis section of the Course and Implementation Guide for additional support in analyzing and responding to student data.

\*Bold TEKS = Readiness Standard

# End of Topic Assessment

## TOPIC 1 Operating with Rational Numbers

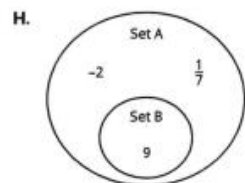
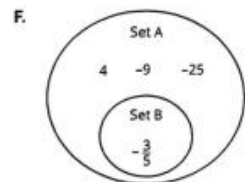
Name \_\_\_\_\_ Date \_\_\_\_\_

1. Andrew is putting mulch in a playground area that he built in his yard. He already has  $4\frac{1}{2}$  bags of mulch to use. Each bag of mulch covers 90.7 square feet. How many square feet will Andrew be able to cover if he uses all of this mulch?

- ★ A. 385.475 ft<sup>2</sup>  
B. 408.15 ft<sup>2</sup>  
C. 362.8 ft<sup>2</sup>  
D. 360.175 ft<sup>2</sup>

$$90.7 \cdot 4.25 = 385.475$$

2. Set A represents rational numbers. Set B represents integers. Which diagram shows the numbers placed in the correct sets?



−4.375 is a decimal and  $\frac{3}{4}$  is a fraction. Decimals and fractions are rational numbers that are not integers. −5 is an integer.

### Notes

7.3A (S)  
Dec w/ Frac - III  
Dec w/ Frac - II  
WORD  
Dec w/ whole - I  
#

\*\*\* STARR

SPS IA

7.2A (S)  
CWINT - III  
with bag

7.3B (R)  
Mult Frac w/ whole  
(word p) - III  
Add/subt - I  
Frac wordp  
Subt/mult  
Dec wordp - I

SPS - Skill practice Set

LAPQ - Lesson Assn. practice Question

SPES - Skill practice Extension Set

## TOPIC 1 Operating with Rational Numbers

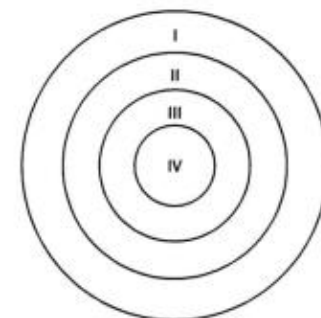
\*\*\* STARR

### Notes

7.2A  
(S)  
2pts

SPS IA

3. The Venn Diagram represents the relationship between integers, natural numbers, rational numbers, and whole numbers.



Which number set is best represented by each section label in the diagram? Select the correct answer in each row.

Number Set	Section I	Section II	Section III	Section IV
Integers		X		
Natural Numbers				X
Rational Numbers	X			
Whole Numbers			X	



# TOPIC 1 Operating with Rational Numbers

Notes

7.3A  
(5)  
1pt

4. Determine the value of the expression.  $-3\frac{4}{5} \div -3\frac{1}{6}$  ✖ STAR

SPS II A, B  
SPES II

5. Determine the value of the expression.  $-6.2(2\frac{3}{4})$   
 $-17\frac{1}{20}$  or  $-17.05$  ✖ STAR

SPS II A  
SPES II

7.3A  
(5)  
1pt

6. Alyssa needs to cut a 12-inch loaf of bread into slices that are  $\frac{5}{6}$  inch thick. ✖✖ STAR

SPS II A  
SPES II

7.3A  
(5)  
2pt

a. How many  $\frac{5}{6}$ -inch thick slices can Alyssa cut from the 12-inch loaf of bread?  
 $12 \div \frac{5}{6} = 12 \cdot \frac{6}{5} = \frac{72}{5} = 14\frac{2}{5}$   
There are 14 full slices that can be cut from the 12-inch loaf of bread, and  $\frac{2}{5}$  of a  $\frac{5}{6}$ -inch slice would be left over.

b. How many inches of bread would be left over?  
 $\frac{2}{5} \cdot \frac{5}{6} = \frac{2}{6} = \frac{1}{3}$   
There would be  $\frac{1}{3}$  inch of bread left over.

# TOPIC 1 Operating with Rational Numbers

7.3B  
(2)  
2pt  
✖ STAR

7. Natalia gave the store clerk \$40.00 to pay for 2 pairs of leggings. The store clerk gave her \$7.12 in change. Each pair of leggings costs the same amount. What is the cost in dollars and cents for each pair of leggings? Explain your reasoning.

\$16.44

The cost of 2 pairs of leggings is the amount Natalia gives the clerk minus her change.  $40 - 7.12 = 32.88$ . The cost of the 2 pairs divided by 2 gives the cost of 1 pair.  $32.88 \div 2 = 16.44$ .

SPS III A

L3 APQ 1-3

7.3B  
(2)  
1pt

✖✖✖ STAR

8. Kaya biked a distance of  $6\frac{1}{2}$  miles each day for 3 days. Then, she biked  $7\frac{1}{4}$  miles each day for the next 5 days. What was the total distance in miles that Kaya biked during these 8 days?

$55\frac{3}{4}$  mi

$6\frac{1}{2} \cdot 3 = 19\frac{1}{2}$

$7\frac{1}{4} \cdot 5 = 36\frac{1}{4}$

$19\frac{1}{2} + 36\frac{1}{4} = 55\frac{3}{4}$

SPS III A

L3 APQ 1-3

7.3B  
(2)  
1pt

✖ STAR

9. Samantha uses a cafeteria account to pay for meals at school. She got a notice saying she owed the school \$7.82. The next day, she gave the school a check to add \$15.75 to her account and spent \$2.25 on lunch. How much money in dollars and cents does Samantha now have in her cafeteria account?

\$5.68

$-7.82 + 15.75 - 2.25 = 5.68$

SPS III A

L3 APQ 1-3

TOPIC 1 Operating with Rational Numbers

Notes

10. Alejandro has 180 pumpkins to sell.

7.3B

(2)

1pt

- $\frac{1}{4}$  of the pumpkins are lumina pumpkins.
- $\frac{1}{6}$  of the pumpkins are jack o'little pumpkins.
- $\frac{1}{10}$  of the pumpkins are sugar pie pumpkins.
- The rest of the pumpkins are cotton candy pumpkins.

SPS III A

L3 APQ 1-3

✖ ✖ ✖ STAR

How many pumpkins are cotton candy pumpkins?

- A. 30      Lumina:  $\frac{1}{4} \cdot 180 = 45$
- B. 45      Jack o'Little:  $\frac{1}{6} \cdot 180 = 30$
- ★ C. 87      Sugar Pie:  $\frac{1}{10} \cdot 180 = 18$
- D. 90      Cotton Candy:  $180 - (45 + 30 + 18) = 180 - 93 = 87$

11. What is the value of the expression  $-4\frac{1}{4} - (-5\frac{3}{8})$ ?

7.3A

(5)

1pt

$1\frac{1}{8}$

✖ STAR

SPS IV B

L4 APQ 1-3

