SECURE MATERIAL – Reader Name: _____ Tennessee Comprehensive Assessment Program

TCAP/CRA 2014



Phase II Rounding Decimals Task Anchor Set

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Rounding Decimals Task

When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters.

a. Write the number 3.79 in word form.

Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters.

b. Explain how Jamir and his dad can round 3.79 in different ways to get their answers.



Rounding Decimals Task

c. Whose rounded answer is a better estimate? How do you know?

d. Jamir sees other items in the store with measurements listed. Complete the chart by rounding the measurements.

Store Item	Round to the Nearest	Round to the Nearest	Round to the Nearest
	Whole	Tenth	Hundredth
A pound of			
butter = 453.590			
grams			
-			
A quart of			
orange juice =			
946.353			
milliliters			

Scoring Guide

The CCSS for Mathematical Content (2 points)

- 5.NBT.A.3 Writes "three and seventy-nine hundredths." (1 Point)
- 5.NBT.A.4 Rounds decimal numbers correctly all six times in the table. **(1 Point)**

The CCSS for Mathematical Practice (2 points)

- MP3 Provides sound justification for the choice of whose rounded estimate is "better."
 (1 Point)
 (MP3: Construct viable arguments and critique the reasoning of others.)
- MP7 Explains how 3.79 can be rounded to both the tenths and the ones place.(1 Point)(MP7: Look for and make use of structure.)

TOTAL POINTS: 4

The CCSS for Mathematical Content Addressed In This Task

Understand the place value system.		
5.NBT.A.3	Read, write, and compare decimals to thousandths.	
5.NBT.A.4	Use place value understanding to round decimals to any place.	

The CCSS for Mathematical Practice*

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

* Gray type indicates Mathematical Practices not addressed in this assessment.



Litho#: 00235200134

A-1b

Rounding Decimals Task Whose rounded answer is a better estimate? How do you know? C. answer is closer to 3.79 en (., leaser with a <u>e</u>?, Jamir sees other items in the store with measurements listed. Complete the chart by d. rounding the measurements. Store Item Round to the Nearest Round to the Nearest Round to the Nearest Whole Tenth Hundredth 1 A pound of butter = 453.590 grams S. Harris 1 C C 1 A A quart of orange juice = 946.353 milliliters 20212

Anchor 1	Litho 00235200134
Total Content Points: 2	(5.NBT.A.3, 5.NBT.A.4)
Total Practice Points: 2	(MP3, MP7)

In Part A, the student correctly writes 3.79 in word form (5.NBT.A.3). In Part B, the student explains how Jamir and his dad can round 3.79 in different ways to get their answers by explaining that 3.79 can be rounded to both the tenths and the ones place ("Jamir can round his to the nearest tenth, but his dad rounded it to the nearest whole") (MP7). The student chooses Jamir's estimate in Part C and provides sound justification why his rounded estimate is better ("his answer is closer to 3.79") (MP3). In Part D, every measurement is rounded correctly, indicating an understanding of place value (5.NBT.A.4).

Total Awarded Points: 4 out of 4



A-2b

Rounding Decimals Task Whose rounded answer is a better estimate? How do you know? **C.** amir cause it 15 iginall num Jamir sees other items in the store with measurements listed. Complete the chart by d. rounding the measurements.

Store Item	Round to the Nearest Whole	Round to the Nearest Tenth	Round to the Nearest Hundredth
A pound of butter = 453.590 grams	454	453.6	453,59
A quart of orange juice = 946.353 milliliters	946	946.4	946,35

Anchor 2	Litho 00245200134
Total Content Points: 2	(5.NBT.A.3, 5.NBT.A.4)
Total Practice Points: 2	(MP3, MP7)

In Part A, the student correctly writes 3.79 in word form (5.NBT.A.3). In Part B, the student explains how Jamir and his dad can round 3.79 in different ways to get their answers by explaining that 3.79 can be rounded to both the tenths and the ones place ("Jamir = can round by tenths . . . Dad = can round by 1 (whole)") (MP7). The student chooses Jamir's estimate in Part C and provides sound justification why his rounded estimate is better ("it is closer to the orginal number than his dad's rounding") (MP3). In Part D, every measurement is rounded correctly, indicating an understanding of place value (5.NBT.A.4).

Total Awarded Points: 4 out of 4

Rounding Decimals Task When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters. The States Write the number 3.79 in word form. a. three and seventhy-nine hundreaths Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters. Explain how Jamir and his dad can round 3.79 in different ways to get their answers. b. Joinic could cound to the Rearest tenth and his COU Conny to ne neorest whate NUMber, Litho#: 00365200136

A-3b

Rounding Decimals Task

- c. Whose rounded answer is a better estimate? How do you know?
- d. Jamir sees other items in the store with measurements listed. Complete the chart by rounding the measurements.

Store Item	Round to the Nearest Whole	Round to the Nearest Tenth	Round to the Nearest Hundredth
A pound of			$\frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right) \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right) \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right) \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right) \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right) \left(\frac{1}{2} + 1$
butter = 453.590	454 000	453607	(153 59D
grams		1 Jonation	-10.00 010
A quart of	Ŭ		S. Murb
orange juice =	OLD DDD	44E400	OUR 450
946.353 milliliters		1 101 10 M	10.100
miniters	millilites	Al Mildaret S	millillers

Anchor 3	Litho 00365200136
Total Content Points: 1	(5.NBT.A.3)
Total Practice Points: 2	(MP3, MP7)

In Part A, the student correctly writes 3.79 in word form (5.NBT.A.3). In Part B, the student explains how Jamir and his dad can round 3.79 in different ways to get their answers by explaining that 3.79 can be rounded to both the tenths and the ones place ("Jamir could round to the nearest tenth and his dad could round to the nearest whole number") (MP7). The student chooses Jamir's estimate in Part C and provides sound justification why his rounded estimate is better ("3.8 is closest to 3.79") (MP3). In Part D, the student incorrectly rounds 946.353 to the hundredths place as 946.450 (no credit for 5.NBT.A.4).

Total Awarded Points: 3 out of 4

1 1 10 2 2 2

145

Rounding Decimals Task

When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters.

a. Write the number 3.79 in word form.

Three and Seventy-Nine hundred the.

Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters.

b. Explain how Jamir and his dad can round 3.79 in different ways to get their answers.

For 3.8, you would round 3.79 to the nearest tenth which would become 3.8. you would Dund 3.79 For , the nearest wholewhich become b.

Litho#: 00195200134

A-4b

Rounding Decimals Task

Whose rounded answer is a better estimate? How do you know? C. would say Jamir 3 dad I know because if you buy a jug of milk, then 3.8 liters can't fill the jug all the ways but 4 liters can d.

Jamir sees other items in the store with measurements listed. Complete the chart by rounding the measurements.

Store Item	Round to the Nearest Whole	Round to the Nearest Tenth	Round to the Nearest Hundredth
A pound of butter = 453.590 grams	454.000	453.600	453,540
A quart of orange juice = 946.353 milliliters	946.000	946.400	946.358

Anchor 4	Litho 00195200134
Total Content Points: 2	(5.NBT.A.3, 5.NBT.A.4)
Total Practice Points: 1	(MP7)

In Part A, the student correctly writes 3.79 in word form (5.NBT.A.3). In Part B, the student explains how Jamir and his dad can round 3.79 in different ways to get their answers by explaining that 3.79 can be rounded to both the tenths and the ones place ("... you would round 3.79 to the nearest tenth, which would become 3.8... you would round 3.79 to the nearest whole, which would become 4") (MP7). The student chooses Jamir's dad's estimate in Part C, but the argument is not sound justification for why his dad's rounded estimate is better ("... if you buy a jug of milk, then 3.8 liters can't fill the jug all the way, but 4 liters can") (no credit for MP3). In Part D, every measurement is rounded correctly, indicating an understanding of place value (5.NBT.A.4).

Total Awarded Points: 3 out of 4



Litho#: 00185200136

A-5b

Rounding Decimals Task Whose rounded answer is a better estimate? How do you know? С. think Y bett-c liters Cstimate 500 372 you get 3.8 well it is decin So you would have to to up again Gr 39 Jamir sees other items in the store with measurements listed. Complete the chart by d. rounding the measurements. Store Item Round to the Nearest Round to the Nearest Round to the Nearest Whole Tenth Hundredth A pound of butter = 453.590 453.600 453.590 54.000 grams A quart of orange juice = 946.000 946.400 946.350 946.353

Litho#: 00185200136

milliliters

Anchor 5	Litho 00185200136
Total Content Points: 2	(5.NBT.A.3, 5.NBT.A.4)
Total Practice Points: 0	

In Part A, the student correctly writes 3.79 in word form (5.NBT.A.3). In Part B, although the student has rounded correctly, the arrows alone do not sufficiently explain rounding to both the tenths and the ones place (no credit for MP7). The student chooses 4 liters as the better estimate in Part C, but the argument is not sound justification for why that rounded estimate is better (". . . when you round 3.79 you get 3.8 well it is still a decimal so you would have to round it up again to 4") (no credit for MP3). In Part D, every measurement is rounded correctly, indicating an understanding of place value (5.NBT.A.4).

Total Awarded Points: 2 out of 4

A-6a **Rounding Decimals Task** When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters. Write the number 3.79 in word form. а. three point sc nine hundreths Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters. Explain how Jamir and his dad can round 3.79 in different ways to get their answers. b. he whole number, Damir did the dfenth,



Anchor 6	Litho 00305200133
Total Content Points: 1	(5.NBT.A.4)
Total Practice Points: 1	(MP7)

In Part A, the student's response is incorrect because it says "point" instead of "and" ("three point seventy-nine hundreths") (no credit for 5.NBT.A.3). In Part B, the student explains how Jamir and his dad can round 3.79 in different ways to get their answers by explaining that 3.79 can be rounded to both the tenths and the ones place ("His dad round by the whole number. Jamir did the tenth.") (MP7). The student chooses 3.8 in Part C, but the argument ("3.8 is closer") does not provide sound justification for why that rounded estimate is better because it fails to indicate to what 3.8 is closer and thus lacks specificity (no credit for MP3). In Part D, every measurement is rounded correctly, indicating an understanding of place value (5.NBT.A.4).

Total Awarded Points: 2 out of 4



A-7b

Round	ling Deci	mals Task	•. •.		
с.	Whose rou	unded answer is a	a better estimat	e? How do`you kno	w? No u gable from
		Jamir's d	ad's estim	mate is b	etter and a start
	becau	use it's i	usually ec	asier to re	ound to
		anga Pagata Anna Turan Tu		en e	
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d.	Jamir see rounding t	s other items in th he measurement	ne store with me s.	easurements listed.	Complete the chart by
Stor	e Item	Round to the N Whole	learest Ro	ound to the Nearest Tenth	Round to the Neares Hundredth
A po butter = gr	ound of = 453.590 ams	450.000	453	.600	453.590
A qu orange	uart of e juice =	950.000	946	.660	946.350

Anchor 7	Litho 00805200134
Total Content Points: 1	(5.NBT.A.3)
Total Practice Points: 0	

In Part A, the student correctly writes 3.79 in word form (5.NBT.A.3). In Part B, the student correctly rounds to the whole number (4), but incorrectly refers to rounding 3.79 to "the hundredths place which would be 3.8" (no credit for MP7). The student chooses Jamir's dad's estimate in Part C, but the argument is not sound justification for why his dad's rounded estimate is better (". . . it's usually easier to round to the whole number") (no credit for MP3). In Part D, both numbers rounded to the nearest whole are incorrect as is the number 946.353 rounded to the nearest tenth (946.600) (no credit for 5.NBT.A.4).

Total Awarded Points: 1 out of 4

-8a

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Rounding Decimals Task

When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters.

a. Write the number 3.79 in word form.

Three and Settenty-thousandths. ning Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters.

b. Explain how Jamir and his dad can round 3.79 in different ways to get their answers.

X	Fr ber	cause	rannal 3.8	different	+ may 5 e 1-17.	er
	More	, than t	3.79,			

A-8b

•.		er is a better estimat	te? How do you know		t
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	Jan Jan		A Z	n n (bijeren de seuve tw	
	5.79	is round	ed to J	0 0	
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d. Jamir sees other items in the store with measurements listed. Complete the chart by rounding the measurements.

Store Item	Round to the Nearest Whole	Round to the Nearest Tenth	Round to the Nearest Hundredth
A pound of butter = 453.590 grams	454	453.6	453.59
A quart of orange juice = 946.353 milliliters	946	946.4	946.35

Anchor 8	Litho 00265200134
Total Content Points: 1	(5.NBT.A.4))
Total Practice Points: 0	

In Part A, the student's response is incorrect ("Three and seventy-nine thousandths") (no credit for 5.NBT.A.3). In Part B, the student's explanation provides no indication of recognizing the structure of math to round to both the tenths and the ones place (" \dots 3.8 is one liter more than 3.79") (no credit for MP7). The student chooses Jamir's Dad's estimate in Part C, but the argument is not sound justification for why his dad's rounded estimate is better (" \dots 3.79 is rounded to 3.8") (no credit for MP3). In Part D, every measurement is rounded correctly, indicating an understanding of place value (5.NBT.A.4).

Total Awarded Points: 1 out of 4

A-9a

Rounding Decimals Task

When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters.

a. Write the number 3.79 in word form.

29 hundredths 3 and

Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters.

b. Explain how Jamir and his dad can round 3.79 in different ways to get their answers.

3.79 = 3.80the hine mates if nau 0 40

Litho#: 00025200133

A-9b

Rounding Decimals Task Whose rounded answer is a better estimate? How do you know? C. Jamir sees other items in the store with measurements listed. Complete the chart by d. rounding the measurements. Round to the Nearest Round to the Nearest Round to the Nearest Store Item Hundredth Tonth

	VVNOIE		Tunureum
A pound of butter = 453.590 grams	454	,60	• 0
A quart of orange juice = 946.353 milliliters	946	•40	. 350

Anchor 9Litho 00025200133Total Content Points: 0Total Practice Points: 1(MP3)

In Part A, the student's response is not entirely in word form ("3 and 79 hundredths") (no credit for 5.NBT.A.3). In Part B, although the rounding is correct, the student's explanation how Jamir and his dad can round 3.79 in different ways to get their answers does not clearly address rounding to the tenths and ones place ("the nine makes it go to 80; the seven makes it go to four") (no credit for MP7). The student chooses Jamir's estimate in Part C and provides sound justification why his rounded estimate is better ("It is the closetest to 3.79") (MP3). In Part D, only the numbers rounded to the nearest whole are correct. The rest are incorrect (no credit for 5.NBT.A.4).

Total Awarded Points: 1 out of 4



- When Jamir goes to the store, he notices that a gallon of milk is also labeled 3.79 liters.
- a. Write the number 3.79 in word form.



Rounding Decimals Task

-three-rand seventy-nime thousanths

Jamir claims that one gallon of milk is close to 3.8 liters. His dad says it is close to 4 liters.

Explain how Jamir and his dad can round 3.79 in different ways to get their answers. b. Lamir: 3.79=3.8 dad;3.79=4.00

Litho#: 00395200136

A-10b

Rounding Decimals Task Whose rounded answer is a better estimate? How do you know? C. Stay to round it to a specific place VAUIS. 그는 집 중 것 있는 동생 문 Jamir sees other items in the store with measurements listed. Complete the chart by d. rounding the measurements.

Store Item	Round to the Nearest	Round to the Nearest	Round-to-the Nearest Hundredth
A pound of butter = 4532590			
grams 🧃	450,000 a	459.000 101	453.7.00 0
A quart of orange juice = 9463353			J J
milliliters 4-	950,000 mm	946,000 mm	946.400 mm

Anchor 10

Litho 00395200136

Total Content Points: 0

Total Practice Points: 0

In Part A, the student's response is incorrect ("three and seventy-nine thousanths") (no credit for 5.NBT.A.3). Although the student has rounded correctly in Part B, the arrows alone do not sufficiently explain rounding to both the tenths and the ones place (no credit for MP7). In Part C, the student fails to make or justify a choice of whose rounded estimate is better (no credit for MP3). In Part D, all six of the measurements are rounded incorrectly (no credit for 5.NBT.A.4).

Total Awarded Points: 0 out of 4