SECURE MATERIAL - Reader Name: _____

Tennessee Comprehensive Assessment Program

TCAP/CRA

2014

7

Phase III

Shipping Rates Task

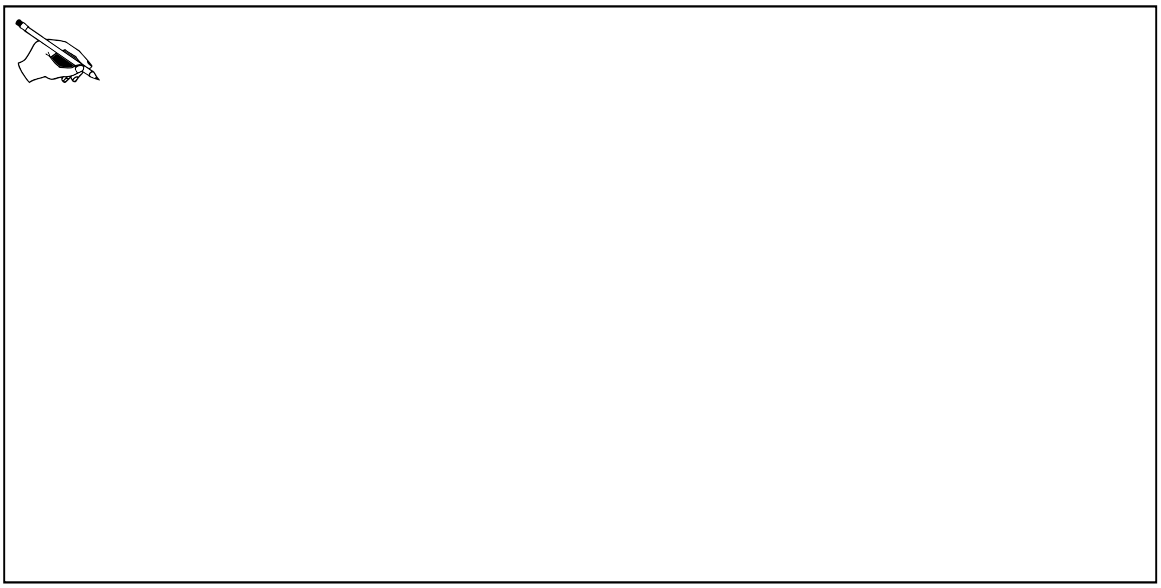
Anchor Set

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.



c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

Scoring Guide

The CCSS for Mathematical Content (4 points)

7-EE.B.4 Writes the inequality $33 + 8.25w < 75$, or an equation equivalent thereto, where w represents the weight of a package in pounds. _____
(1 Point)

7-EE.B.3 Determines that Jeanne will be able to send a package weighing 4.8 pounds in one of the following ways: _____
- multiplying 4.8 by 8.25 and adding 33;
- finding the maximum allowable weight and then testing to see if 4.8 is less than that value; or
- creating a table with weights and costs and seeing whether 4.8 falls within the allowable range.

(1 Point)

7-EE.B.4b Determines the most that Jeanne's package can weigh in one of the following ways: _____
- solving the inequality $33 + 8.25w < 75$ algebraically;
- creating and using a table to test values for the package weights to see when the total cost exceeds or is equal to 75; or
- finding when the costs equal 75 by evaluating the expression $\frac{75-33}{8.25}$.

(1 Point)

7-EE.A.1 Uses the distributive property as a strategy to expand the expression $8.25(4 + w)$ into $33 + 8.25w$. _____
(1 Point)

The CCSS for Mathematical Practice (2 points)

MP3 Constructs a viable argument to explain why the expression in part d can be related back to the problem context and hence can be used to determine the cost of shipping a package. _____
(1 Point)
(MP3: Construct viable arguments and critique the reasoning of others.)

MP6 Algebraic expressions and all calculations are correct; mathematical language and notation is precise. _____
(1 Point)
(MP6: Attend to precision.)

TOTAL POINTS: 6

The CCSS for Mathematical Content Addressed In This Task

Analyze proportional relationships and use them to solve real-world and mathematical problems.	
7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	
7.EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*
7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
7.EE.B.4b	Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*

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.

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$75 > 33 + 8.25x$ x = pounds

$75 - 33 > 8.25x$

$42 > 8.25x$

$\frac{42}{8.25} > \frac{8.25x}{8.25}$

$5.0\overline{9} > x$

So to make her cost less than $75 she will have a package 5 pounds or less.

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

Yes. Because $4.8 < 5.0\overline{9}$ and would only cost her $72.60.

$72.60 < 75.00$

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

The most Jeanne's package can weigh is $5\frac{1}{11}$ lbs.

$5.\overline{09} = 5\frac{1}{11}$

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

Agree. $8.25(4+w)$, if you use the distributive property equals out to

$33 + 8.25w$

- 33: initial fee for insurance
- 8.25: cost per pound
- w: number of pounds

Anchor 1 Litho 00417200163

Total Content Points: 4 (7.EE.B.4, 7.EE.B.3, 7.EE.B.4b, 7.EE.A.1)

Total Practice Points: 2 (MP3, MP6)

In Part A, the student writes the correct inequality $75 > 33 + 8.25x$ (7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by comparing 4.8 pounds to the maximum allowable weight calculated in Part A and by calculating the actual shipping cost and comparing it to $75.00 (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is $5\frac{1}{11}$ lbs. (7.EE.B.4b). In Part D, the student uses the distributive property to expand the expression $8.25(4 + w)$ into $33 + 8.25w$ (7.EE.A.1). By writing out the result of applying the distributive property in Part D, the student constructs a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package (MP3). Algebraic expressions and all calculations are correct, and mathematical language and notation are precise (MP6).

Total Awarded Points: 6 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$75 > 8.25_p + 33$

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

yes, $8.25 \times 4.8 = 39.6$

$39.6 + 33 = 72.6$

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

5 pounds.

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

I agree, because $8.25 \times 4 = 33$ and $8.25 \times w = 8.25w$.

Litho#: 00437200163

Anchor 2 Litho 00437200163

Total Content Points: 4 (7.EE.B.4, 7.EE.B.3, 7.EE.B.4b, 7.EE.A.1)

Total Practice Points: 1 (MP6)

In Part A, the student writes the correct inequality $75 > 8.25p + 33$ (7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by calculating the actual shipping cost (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 5 pounds, acceptably rounding to the nearest whole pound (7.EE.B.4b). In Part D, the student uses the distributive property to expand the expression $8.25(4 + w)$ into its component elements (7.EE.A.1). However, in Part D, the student does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package. Although the student has multiplied both 4 and w by 8.25, without putting the two terms back together, there is no expression that can be related back to the problem situation (no credit for MP3). Algebraic expressions and all calculations are correct, and mathematical language and notation are precise. Additionally, there is sufficient work shown to demonstrate precision (MP6).

Total Awarded Points: 5 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$8.25x + 33 < \$75.00$

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

$8.25 \cdot 4.8 + \$33 =$

$\$13.05 + \$33 = \$46.05$

YES, BECAUSE THE COST WOULD ONLY BE $46.05.

Litho#: 00327200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

$8.25x + 33 < \$75.00$

$8.25x < 75.00 - 33$

$8.25x < \$42.00$

8.25

$x = 5.09$

5.090909

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

$8.25(4 + w)$

$33 + 8.25w$

$8.25(4+w)$

$33+8.25w$

$33+8.25 \cdot 4.8$

$33+13.05$

$\$46.05$ ✓

YES, THIS EXPRESSION CAN BE USED THE THE COST OF SHIPPING

Anchor 3 Litho 00327200163

Total Content Points: 4 (7.EE.B.4, 7.EE.B.3, 7.EE.B.4b, 7.EE.A.1)

Total Practice Points: 1 (MP3)

In Part A, the student writes the correct inequality $\$8.25x + 33 < \$75.00$ (7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by calculating the actual shipping cost. The student begins with a correct process and draws a correct conclusion based on a calculation error (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is $5.\overline{09}$ (7.EE.B.4b). In Part D, the student uses the distributive property to expand the expression $8.25(4 + w)$ into $33 + 8.25w$ (7.EE.A.1). By writing out the result of applying the distributive property in Part D, the student constructs a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package (MP3). In Parts A and D, the student makes a minor calculation error by adding 8.25 and 4.8 instead of multiplying them, and the answer in Part C does not indicate a unit of weight, demonstrating a lack of precision (no credit for MP6).

Total Awarded Points: 5 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$8.25x + 33 \leq 75$

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

Yes

$8.25 \cdot (4.8) + 33 = 72.6$

Litho#: 00387200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

5 pounds.

$8.25 \cdot (5) + 33 = 74.25$

So, the maximum her package can weigh is 5 pounds.

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

Yes.

$8.25 \cdot (4 + 4.8) = 72.6$

$8.25 \cdot (4 + 5) = 74.25$

Litho#: 00387200163

Anchor 4 Litho 00387200163

Total Content Points: 4 (7.EE.B.4, 7.EE.B.3, 7.EE.B.4b, 7.EE.A.1)

Total Practice Points: 0

In Part A, the student writes the inequality $8.25x + 33 \leq 75$. The use of "≤" instead of "<" is considered a minor error, and the student still receives the content point (7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by calculating the actual shipping cost (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 5 pounds, which is an acceptable way to round 5.09 pounds (7.EE.B.4b). While the student does not use the distributive property in Part B to expand the expression $8.25(4 + w)$ into $33 + 8.25w$, by finding the cost for the two different weights already found in Part B and Part C of the response, the student does use a valid alternate strategy that would prove the two expressions are equivalent (7.EE.A.1). In Part D, the student does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package. Although the student calculates the costs of shipping packages of 4.8 pounds and 5 pounds, and these results are identical to the calculations in Parts B and C, the student makes no reference to these earlier results, so the argument is incomplete (no credit for MP3). In Part A, the student incorrectly uses a "less than or equal to" sign instead of a "less than" sign, demonstrating a lack of precision (no credit for MP6).

Total Awarded Points: 4 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$75 > 8.25x + 33$

$42 > 8.25x$

8.25

$x < 5$ pounds

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

Yes that is less than 5 pounds

Litho#: 00307200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

It can weigh no more then 5.09 pounds.

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

No, you have to add the +33 flat fee too, and the 4 is not needed.

Litho#: 00307200163

Anchor 5 Litho 00307200163

Total Content Points: 3 (7.EE.B.4, 7.EE.B.3, 7.EE.B.4b)

Total Practice Points: 1 (MP6)

In Part A, the student writes the correct inequality $75 > 8.25x + 33$ (7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by comparing 4.8 pounds to the maximum allowable weight calculated in Part A (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 5.09 pounds (7.EE.B.4b). In Part D, the student does not use the distributive property to expand the expression $8.25(4 + w)$ into $33 + 8.25w$ (no credit for 7.EE.A.1). The student also does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package (no credit for MP3). Algebraic expressions and all calculations are correct, and mathematical language and notation are precise. Although the student's argument in Part D is incorrect, it is not imprecise. Additionally, there is sufficient work shown to demonstrate precision (MP6).

Total Awarded Points: 4 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$8.25x + 33 < 75$

Say you need to send 6 pounds of meat to Europe. $8.25(6) + 33 \leq 75$

$82.5 \leq 75$

It would not be in her budget.

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

$8.25(4.8) + 33 < 75$

$72.6 \leq 75$

Yes, $72.60 is less than $75.

Litho#: 00357200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

$8.25x + 33 < 75$

$8.25x < 75 - 33$

$8.25x < 42$

$8.25x < 5\frac{1}{11}$

$5\frac{1}{11}$ pounds

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

$8.25(4+w)$

$8.25(4+4.8)$

$33 + 39.6$

72.6

Yes, you can use it.

Anchor 6 Litho 00357200163

Total Content Points: 3 (7.EE.B.4, 7.EE.B.3, 7.EE.B.4b)

Total Practice Points: 0

In Part A, the student writes the inequality $8.25x + 33 < 75$ (7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by calculating the actual shipping cost and comparing it to \$75 (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is $5\frac{1}{11}$ pounds (7.EE.B.4b). In Part D, the student does not use the distributive property to expand the expression $8.25(4 + w)$ into $33 + 8.25w$, and does not use a valid alternate strategy to prove the two expressions are equivalent. One data point is not enough to determine the two expressions are equivalent (no credit for 7.EE.A.1). In Part D, the student does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package (no credit for MP3). In Parts A and B, the student alternates between the "less than" sign and the "less than or equal to" sign, demonstrating a lack of precision (no credit for MP6).

Total Awarded Points: 3 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$y = 8.25x + 33$

$y = 8.25(5) + 33$

$y = \$74.25$

The most it can weigh is 5 pounds.

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

Yes, because it will still be under $75.00

$8.25 \times 4.8 + 33 = \$72.60$

Litho#: 00317200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

Litho#: 00317200163

Anchor 7 Litho 00317200163

Total Content Points: 2 (7.EE.B.3, 7.EE.B.4b)

Total Practice Points: 1 (MP6)

The student does not write an inequality in Part A (no credit for 7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by calculating the actual shipping cost and comparing it to $75.00 (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 5 pounds, which is an acceptable way to round 5.09 pounds (7.EE.B.4b). The student makes no attempt to respond to the question in Part D (no credit for 7.EE.A.1; no credit for MP3). Algebraic expressions and all calculations are correct, and mathematical language and notation are precise. Additionally, there is sufficient work shown to demonstrate precision (MP6).

Total Awarded Points: 3 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$8.25x + 33$

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

$8.25(4.8) + 33$

$39.6 + 33$

72.6

yes

Litho#: 00647200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

5 pounds

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

No. she forget the 33$ insorence fee.

Litho#: 00647200163

Anchor 8 Litho 00647200163

Total Content Points: 2 (7.EE.B.3, 7.EE.B.4b)

Total Practice Points: 0

The student does not write an inequality in Part A (no credit for 7.EE.B.4). In Part B, the student determines that Jeanne will be able to send a package weighing 4.8 pounds by calculating the actual shipping cost (7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 5 pounds, which is an acceptable way to round 5.09 pounds (7.EE.B.4b). In Part D, the student does not use the distributive property to expand the expression $8.25(4 + w)$ into $33 + 8.25w$ (no credit for 7.EE.A.1). The student also does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package (no credit for MP3). The student places the dollar sign in the wrong place in Part D, which is a minor error in notation; and the amount of work shown is minimal (no credit for MP6).

Total Awarded Points: 2 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$8.25x + 33$

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

Yes. She will be able to because, if you solve the equation, it is less than $75.00

Litho#: 00657200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

5 pounds

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

Disagree. I disagree b/c 4 is a random number and is useless in this problem, plus she didn't put the shipping fee into the equation.

Litho#: 00657200163

Anchor 9 Litho 00657200163

Total Content Points: 1 (7.EE.B.4b)

Total Practice Points: 0

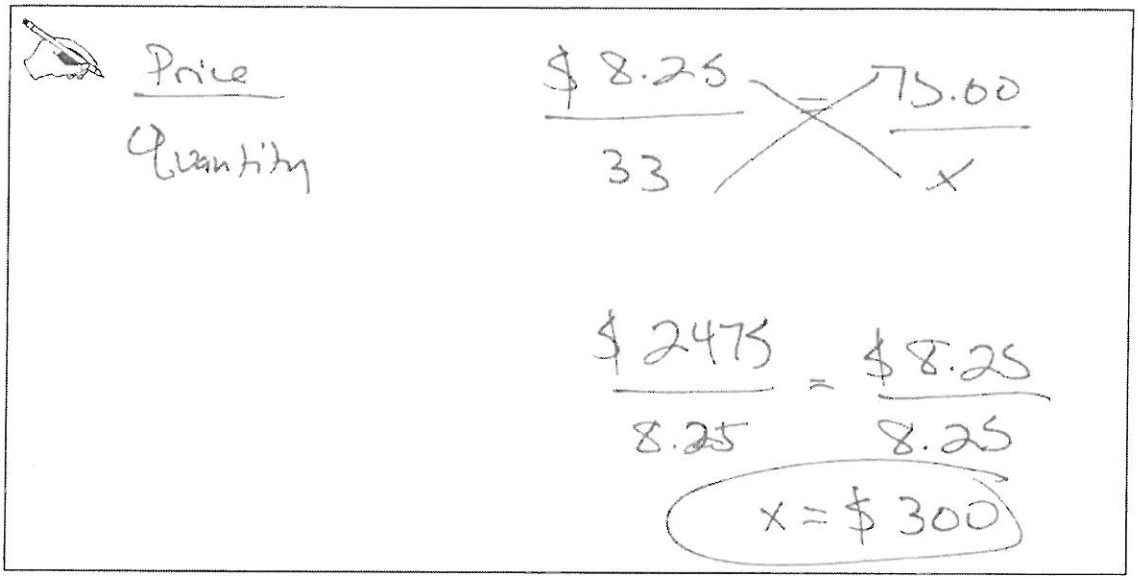
The student does not write an inequality in Part A (no credit for 7.EE.B.4). In Part B, the student states “Yes. She will be able to”, but does not provide sufficient mathematical justification for the assertion (no credit for 7.EE.B.3). In Part C, the student determines that the most Jeanne’s package can weigh is 5 pounds, which is an acceptable way to round 5.09 pounds (7.EE.B.4b). In Part D, the student does not use the distributive property to expand the expression $8.25(4 + w)$ into $33 + 8.25w$ (no credit for 7.EE.A.1). In Part D, the student does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package (no credit for MP3). The student does not perform any calculations, and thus does not show enough work to demonstrate precision. Also, the language used in Part D (“4 is a random number and is useless in this problem”) is imprecise
(no credit for MP6).

Total Awarded Points: 1 out of 6

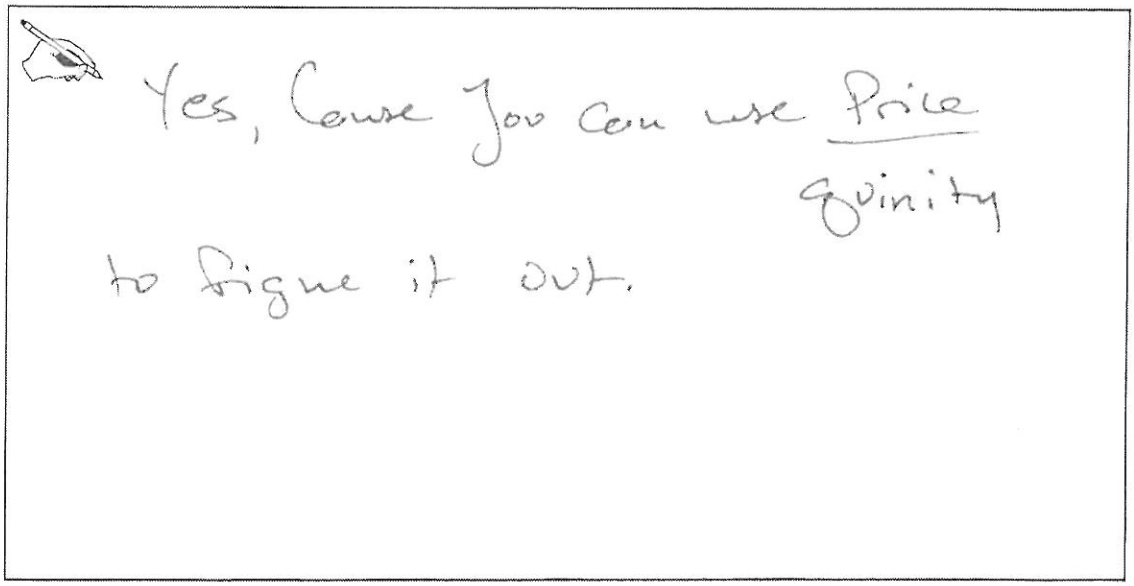
Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.



b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.



Litho#: 00477200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

5.1 Pounds

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

I agree with Jeanne cause you can use the distributive property to Justify your Answer.

Litho#: 00477200163

Anchor 10 Litho 00477200163

Total Content Points: 1 (7.EE.B.4b)

Total Practice Points: 0

The student does not write an inequality in Part A (no credit for 7.EE.B.4). In Part B, the student agrees that Jeanne will be able to send a package weighing 4.8 pounds, but does not provide sufficient mathematical justification for the assertion (no credit for 7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 5.1 pounds. Although this weight results in a total shipping cost of over $75.00, it is the correct answer of 5.09 pounds rounded to the nearest tenth of a pound (7.EE.B.4b). In Part D, while the student makes reference to the distributive property, there is no indication of what the result would be if it were applied to the expression $8.25(4 + w)$ (no credit for 7.EE.A.1). The student therefore does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package. Although the student makes reference to the distributive property, without showing the result, the argument is incomplete (no credit for MP3). In Part C, the student rounds 5.09 pounds up to 5.1 pounds without recognizing that this weight would result in a total shipping cost of over $75.00, demonstrating a lack of precision (no credit for MP6).

Total Awarded Points: 1 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

$8.25 + 33 = 41.25

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

8.25 + 4.8 = 13.05

Yes. She will be able to ship a package that weighs 4.8 lbs

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c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

66 lbs is the most that the box could weigh without going over her budget.

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

$8.25 \cdot 4 = 33$

I agree with Jeanne that this expression is right.

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Anchor 11 Litho 00087200163

Total Content Points: 0

Total Practice Points: 0

The student does not write an inequality in Part A (no credit for 7.EE.B.4). In Part B, the student states that Jeanne will be able to send a package weighing 4.8 pounds, but the student's process for determining the shipping cost is incorrect (no credit for 7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 66 pounds, which is an incorrect value resulting from a process error (no credit for 7.EE.B.4b). In Part D, while the student partially applies the distributive property to multiply 8.25 by 4, there is insufficient evidence that the student knows how to correctly complete the process (no credit for 7.EE.A.1). The student therefore does not construct a viable argument to explain why $8.25(4 + w)$ can be used to determine the cost of shipping a package, because although the student begins to apply the distributive property, without completing the process and showing the result, the argument is incomplete (no credit for MP3). In Part A, the student is inconsistent about the use of the dollar sign in the equation, demonstrating a lack of precision (no credit for MP6).

Total Awarded Points: 0 out of 6

Shipping Rates Task

A shipping company charges $8.25 per pound to send packages anywhere in Europe, plus a flat charge of $33 to cover insurance and customs charges. Jeanne wants the total cost to ship her package to be less than $75.00. She wants to know the most that the package can weigh and still stay within her budget.

a. Write an inequality that can be used to represent this problem.

4 pounds = 66.00

b. Will Jeanne be able to send a package that weighs 4.8 pounds? Use mathematical reasoning to explain your answer.

Yes. It adds up to 70.64.

Litho#: 00247200163

c. What is the most Jeanne's package can weigh if she wants to stay within her budget?

4.95

d. Jeanne says that the expression $8.25(4 + w)$ can be used to determine the cost of shipping a package that weighs w pounds. Do you agree or disagree with Jeanne? Justify your position using mathematics.

Anchor 12 Litho 00247200163

Total Content Points: 0

Total Practice Points: 0

The student does not write an inequality in Part A (no credit for 7.EE.B.4). In Part B, the student agrees that Jeanne will be able to send a package weighing 4.8 pounds, but an incorrect shipping cost with no work shown does not provide sufficient mathematical justification for the assertion (no credit for 7.EE.B.3). In Part C, the student determines that the most Jeanne's package can weigh is 4.95, which is an incorrect value with no work shown for justification (no credit for 7.EE.B.4b). The student makes no attempt to respond to the question in Part D (no credit for 7.EE.A.1; no credit for MP3). An insufficient amount of work is shown to demonstrate acceptable attention to precision, and in Part A, the student sets 4 pounds equal to 66.00 (no credit for MP6).

Total Awarded Points: 0 out of 6