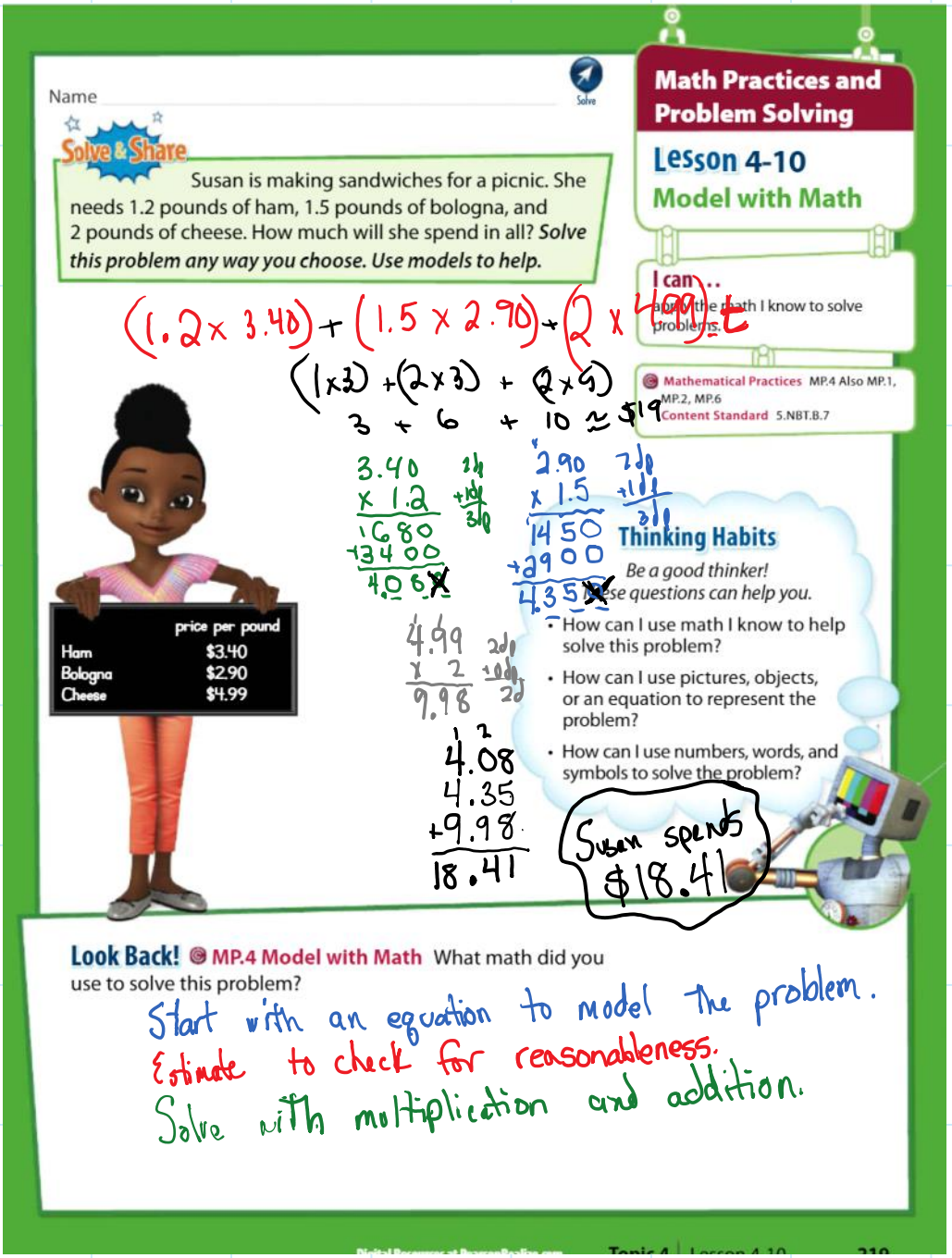
Lesson 4-10

Friday, October 11, 2019 2:08 PM



Name _____

Solve

Solve & Share

Susan is making sandwiches for a picnic. She needs 1.2 pounds of ham, 1.5 pounds of bologna, and 2 pounds of cheese. How much will she spend in all? *Solve this problem any way you choose. Use models to help.*

(1.2 × 3.40) + (1.5 × 2.90) + (2 × 4.99) = E

(1 × 3) + (2 × 3) + (2 × 5) = 19

3 + 6 + 10 ≈ $19

3.40 × 1.2 = 1680 + 3400 = 4.08

2.90 × 1.5 = 1450 + 2900 = 4.35

4.99 × 2 = 9.98

4.08 + 4.35 + 9.98 = 18.41

Susan spends $18.41

	price per pound
Ham	$3.40
Bologna	$2.90
Cheese	$4.99

Math Practices and Problem Solving

Lesson 4-10

Model with Math

I can...

... apply the math I know to solve problems.

Mathematical Practices MP.4 Also MP.1, MP.2, MP.6

Content Standard 5.NBT.B.7

Thinking Habits

Be a good thinker! These questions can help you.

- How can I use math I know to help solve this problem?
- How can I use pictures, objects, or an equation to represent the problem?
- How can I use numbers, words, and symbols to solve the problem?

Look Back! MP.4 Model with Math What math did you use to solve this problem?

Start with an equation to model the problem.
Estimate to check for reasonableness.
Solve with multiplication and addition.

How Can You Model a Problem with an Equation?

A

Alex is buying vegetables for dinner. He buys 6 ears of corn, 1.4 pounds of green beans, and 2.5 pounds of potatoes. How much money does he spend?

Green Beans	$1.80/lb
Potatoes	$0.70/lb
Corn	$0.35/ear

What do I need to do to solve the problem?

I need to find how much money Alex spends on vegetables.

B **How can I model with math?**

I can

- use previously learned concepts and skills.
- decide what steps need to be completed to find the final answer.
- use an equation to represent and solve this problem.

C Here's my thinking...

I will use an equation to represent this situation.

Let t be the total cost.

$t = (6 \times \$0.35) + (1.4 \times \$1.80) + (2.5 \times \$0.70)$

Multiply with money as you would multiply with decimals.

Corn	Green beans	Potatoes
$^{2}\,^{3}0.35$	$^{3}1.80$	$^{1}\,^{3}0.70$
$\times \quad 6$	$\times \quad 1.4$	$\times \quad 2.5$
2.10	720	350
	$+ 1800$	$+ 1400$
	2.520	1.750

Now add the subtotals.

$\$2.10 + \$2.52 + \$1.75 = \$6.37$

So, Alex spends $6.37 on vegetables.

Convince Me! MP.4 Model with Math Beth buys 3.2 pounds of potatoes and gives the clerk a $5 bill. Write an equation that shows how much change she will get back. Explain how your equation represents this problem.

$C = 5.00 - (\$0.70 \times 3.2)$

The parantheses are solved first to find the cost of the potatoes. Then we take the cost away from $5 to find the change.

Name _____

Guided Practice

MP.4 Model with Math

Jackie downloaded 14 songs priced at $0.99 each and 1 song for $1.29. She had a coupon for $2.50. What was the total amount Jackie paid?

You can model with math by writing an equation to show how the quantities in the problem are related.

1. What do you need to find first?

Find the cost of 14 songs.

2. Write an equation to represent the problem.

$t = (14 \times 0.99) + 1.29 - 2.50$

3. What is the solution to the problem?

$(4 \times 1) + 1 - 3$

$14 + 1 - 3 = 12$

0.99 × 14 = 396 + 990 = 13.86

13.86 + 1.29 = 15.15

15.15 − 2.50 = $12.65

Complete 4-6

Independent Practice

MP.4 Model with Math

George bought 2.5 pounds of each type of fruit shown on the sign. What was the total cost of the fruit he bought?

Apples	$1.30/lb
Grapes	$1.65/lb
Bananas	$0.49/lb

4. What do you need to find?

The cost of all the fruit.

5. Write an equation to represent the problem.

$t = (2.5 \times 1.30) + (2.5 \times 1.65) + (2.5 \times 0.49)$

$t = 2.5 \times (1.30 + 1.65 + 0.49)$

6. What is the solution to the problem?

1.30 + 1.65 + 0.49 = 3.44

3.44 × 2.5 = 11.720 + 6.880 = 8.600

$3 \times (2 + 0) = 9$

George spent $8.60