6.EE.7

Math Objective: I can use an equation or expression to solve real-world, mathematical problem.

Language Objective: I will analyze, discuss, plan, and solve, word problems with my partner.

Bike Rental Plans		
	Weekdays	**Weekends**
Service Charge	$5.00	$8.50
Mountain Bike	$10.00 hour	$12.00 hour
Road Bike	$7.50 hour	$10.00 hour

Problem #1:

The bike rental store has two bike rental plans. For each plan you pay a service charge and an hourly rate, depending on the day for the week and the type of bike.

On Saturday, bill wants to rent a mountain bike. He has $85. What is the greatest number of hours that Bill can rent a mountain bike?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

     - List what you know on your paper.

Plan

Write an equation.

   - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

   - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

         Did I correctly compute the answer?

Look Back – Does my answer make sense?

Bike Rental Plans		
	Weekdays	**Weekends**
Service Charge	$5.00	$8.50
Mountain Bike	$10.00 hour	$12.00 hour
Road Bike	$7.50 hour	$10.00 hour

Problem #2:

Sal wants to rent a road bike on Wednesday. He has $30. What is the longest time that he can rent the bike?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

       Did I correctly compute the answer?

Look Back – Does my answer make sense?

Bike Rental Plans		
	Weekdays	Weekends
Service Charge	$5.00	$8.50
Mountain Bike	$10.00 hour	$12.00 hour
Road Bike	$7.50 hour	$10.00 hour

Problem #3:

When Benjamin rented a mountain bike on Tuesday, he was charged $45. For how long did Benjamin rent the bike?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Problem #4:

While training in a competition, Mel walked for 10 minutes, ran for 24 minutes, and swam for 18 minutes. Then he rested. If he trained for one hour, how long did Mel rest?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

      Did I correctly compute the answer?

Look Back – Does my answer make sense?

Bike Rental Plans		
	Weekdays	**Weekends**
Service Charge	$5.00	$8.50
Mountain Bike	$10.00 hour	$12.00 hour
Road Bike	$7.50 hour	$10.00 hour

Problem #5:

Richard rented a mountain bike for 5 hours on Saturday and a road bike on Tuesday for 2 hours. How much did he pay for both rentals?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

     - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

       Did I correctly compute the answer?

Look Back – Does my answer make sense?

Problem #6:

A one-day ski pass from Saddleback Ski Club cost $50. In February, Micky spent $250 on ski passes. How many did she buy?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Problem #7:

Last season, the Saddleback Ski Club had 110 members. The club collected a total of $4950 in membership fees. How much did the club charge each member?

⌒ Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

⌒ Plan

Write an equation.

    - What is the unknown number that you need to find?

⌒ Solve

Keep the equation balanced as you find the value of your variable.

⌒ Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

       Did I correctly compute the answer?

Look Back – Does my answer make sense?

Bicycle Facts and Statistics
- Calories burned by a 130-pound cyclist pedaling 14 miles per hour: 402 calories
- Calories burned by a 180-pound cyclist pedaling 14 miles per hour: 540 calories
- Bicycles that can be parked in the space required for on automobile: about 12 bicycles

Problem #8:

How many more calories are burned by a 180-pound cyclist than a 130-pound cyclist if both pedal 14 miles in an hour?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Bicycle Facts and Statistics
- Calories burned by a 130-pound cyclist pedaling 14 miles per hour: 402 calories
- Calories burned by a 180-pound cyclist pedaling 14 miles per hour: 540 calories
- Bicycles that can be parked in the space required for on automobile: about 12 bicycles

Problem #9

How many bikes can fit in a parking lot with 52 spaces for automobiles?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Bicycle Facts and Statistics
- Calories burned by a 130-pound cyclist pedaling 14 miles per hour: 402 calories
- Calories burned by a 180-pound cyclist pedaling 14 miles per hour: 540 calories
- Bicycles that can be parked in the space required for on automobile: about 12 bicycles

Partner Work Problem #10

How many calories will a 180-pound cyclist burn in 3 hours?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

            Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #11

An electrician uses this equation to calculate the cost, *C*, in dollars, of a repair that takes *h* hours.

$C = 30 + 40h$

If the repair takes 3.5 hours, what is the total cost?

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #12

Potato salad and coleslaw each cost $2 per pound at a deli shop. If you buy p pounds of potato salad and c pounds of ham, write an expression.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

- List what you know on your paper.

Plan

Write an equation.

- What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

- Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #13

Potato salad and coleslaw each cost $2 per pound at a deli department. If you buy p pounds of potato salad and c pounds of ham, use the expression you wrote in #12 to find the total cost, given p = 3 and c = 2.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #14

All boots are on sale for $25 off the regular price. The variable p will represent the regular price in dollars for the boots. Write an expression to show the regular price of the boots and the discount.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

   - List what you know on your paper.

Plan

Write an equation.

   - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

   - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

         Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #15

At the snowboard shop, all the snowboards are on sale for $35 off the regular price. If p represents the regular price of a snowboard in dollars, write an expression that give the sales price in dollars.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

- List what you know on your paper.

Plan

Write an equation.

- What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

- Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #16

Chad was able to get a $20 off the regular price for his snowboard boots. Write an expression to show the deal he got. Use r for the regular price.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

     - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?

Partner Work Problem #17

Chad was able to get a $20 off the regular price for his snowboard boots. Use the expression to show the deal he got and find the price he paid given, r = 85.

⌒ Understand the Problem

Discuss with your partner:

- What is the question?
- What do you need to find out?
- What do you know from the information above?
    - List what you know on your paper.

⌒ Plan

Write an equation.
    - What is the unknown number that you need to find?

⌒ Solve

Keep the equation balanced as you find the value of your variable.

⌒ Look back

Look back at the question.
    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?
            Did I correctly compute the answer?

Look Back – Does my answer make sense?

UTA Ski Bus Service		
SnowBasin	Regular	Senior Pass
One way fee	4.50	2.25

Partner Work Problem #18

Chad is in takes the bus with his friends to and from SnowBasin every weekend. He rides the about *r* times a month. Write an equation to show how much it costs him to ride to and from SnowBasin in a month? Now find the total cost given, r = 3.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

- List what you know on your paper.

Plan

Write an equation.

- What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

- Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

Did I correctly compute the answer?

Look Back – Does my answer make sense?

UTA Ski Bus Service		
SnowBasin	Regular	Senior Pass
One way fee	4.50	2.25

Partner Work Problem #19

Chad and his grandfather are going snowboard and decide to use the bus service this weekend. Write an equation to show the cost for the trip to and from SnowBain.

Understand the Problem

Discuss with your partner:

- What is the question?

- What do you need to find out?

- What do you know from the information above?

    - List what you know on your paper.

Plan

Write an equation.

    - What is the unknown number that you need to find?

Solve

Keep the equation balanced as you find the value of your variable.

Look back

Look back at the question.

    - Did you give a reasonable answer?

Ask Yourself

Understand – What does the question ask me to find?

Plan – Did I write the correct equation to answer the question?

Solve – Did I use the correct operation(s)?

        Did I correctly compute the answer?

Look Back – Does my answer make sense?