



MISSISSIPPI

EXEMPLAR

Units & Lessons

MATHEMATICS

Grade 1

Grant funded by:



Lesson 8: Pirates Make Number Sentences

Focus Standard(s): 1.OA.2, 1.OA.8

Additional Standard(s): 1.OA.4

Standards for Mathematical Practice: SMP.2, SMP.3, SMP.7

Estimated Time: 70 minutes

Resources and Materials:

- Game boards for 'What is the Missing Number?' game – one per each pair of students
- Number balance
- Number Bonds
- Number Cards 0-20
- Number cards/tiles (0-9) for each pair of students
- Handout 3.2: Number Bonds
- Handout 7.2: Number Lines
- Handout 8.1: Missing Numbers Practice Page
- Handout 8.2: Missing Numbers Homework
- You tube education video: Sesame Street: Elmo The Musical - "Heave Ho Addition Song"
<https://www.youtube.com/watch?v=dw7YxxQmgIM>

Lesson Target(s):

- Students will determine the unknown whole number in addition or subtraction equations.
- Students will use mental strategies to add and subtract numbers within 10 with ease.
- Students will use the equal sign appropriately.

Guiding Question(s):

- How does the relationship between addition and subtraction help us know more facts?
- How will knowing facts help you in other areas of math?

Vocabulary

Academic Vocabulary: Refer to the word wall frequently.

- Addition
- Compare
- Difference
- Minus
- Reasonable
- Subtraction
- Sum
- Total

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words
- Act out the words or attach movements to the words

Symbol

Type of Text and Interpretation of Symbol



Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level

✓

Assessment (Pre-assessment, Formative, Self, or Summative)

Instructional Plan

Understanding Lesson Purpose and Student Outcomes:

Students will write a number sentences after watching a video and talking about using subtraction to help find missing addends. Various strategies will be used (number lines, number bonds).

Anticipatory Set/Introduction to the Lesson/Activity #1: Make a Number Sentence

Hold up 3 number cards that have a relationship (3, 5, 8). Ask students if they can make a number sentence with the 3 cards? ($3 + 5 = 8$, $5 + 3 = 8$, $8 - 3 = 5$, and $8 - 5 = 3$)

Write all responses on the board and let students challenge, critique, and/or correct the work of other students (SMP.3).

For students who are EL, have disabilities, or perform well below grade level:

- Students use counters and Part-Part-Whole templates to calculate

Extensions for students with high interest or working above grade level:

- Students can write a subtraction story to match the 3 numbers.

Activity 2: Vocabulary Tic-Tac-Toe

Draw a large grid on chart paper and tape a vocabulary card in each square. Divide students into two teams and designate one team as X and the other as O. Teams take turns choosing a word and defining it. If the team defines the word correctly, remove the card and place an X or an O in the square. Leave the card on the board if the team answers incorrectly. Continue play until a team has three in a row.

Activity 3: Heave Ho, Pirates!

Have students sing along with Sesame Street: Elmo The Musical [Heave Ho Addition Song](#). Use questions to encourage discussion and recall of facts.

Prompting Questions:

- How many chicken sailors did Elmo have at first? (4)
- How many more sailors joined them? (4 more)
- How many chicken sailors did Elmo have then? (8)
- What if Elmo started with 4 chicken sailors and ended up with 9 chicken sailors. How many chicken sailors came on board? (5)

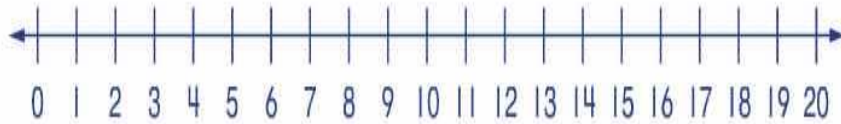
Write the expression $4 + \underline{\quad} = 9$ and ask: "How do we know that the missing addend is 5?" ($4 + 5 = 9$) "Can we use subtraction to help us find the missing addend?"

Write the expression $9 - 4 = 5$.

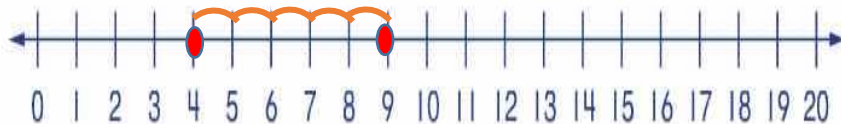
Activity 4: Partner Work

Use a number line to show how to use subtraction to find the missing whole number in an addition expression.

Distribute **Handout 7.2: Number Lines** and markers to students. Display $4 + \underline{\quad} = 9$ and a number line.



T: Place a mark on 4 and a mark on 9.



How many spaces are between 4 and 9? (5)

So, 4 and 5 more equals 9 and we can write an addition sentence for the 3 numbers: $4 + 5 = 9$

Write $4 + 5 = 9$

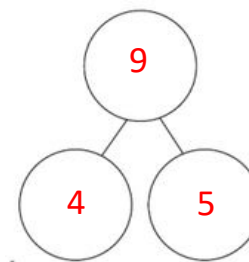
T: Can we write a subtraction sentence too?

Write $9 - 4 = 5$

T: When we put our 3 numbers in a number bond, it shows the relationship between the 3 numbers.

Draw a number bond and place the 3 numbers in the number bond. Ask students to tell you where the numbers go.

T: Remember, the number with the greatest value goes on top and the other 2 numbers go in the bottom circles.



Practice finding missing addends with these missing addend expressions:

$$3 + \underline{\quad} = 14 \quad \underline{\quad} + 7 = 15 \quad 2 + \underline{\quad} = 11$$

Using number bonds and number lines, students develop strategies for finding structure in addition and subtraction. (SMP.7)

Have students use their number line and markers to determine the missing addends and draw number bonds in their math journals.

Display and do a close reading of the following story problem with students:

6 parrots were in the tree. 4 of the parrots flew away. How many parrots were left on the tree?

Model using a number line and number bond to write an addition expression and a subtraction expression while students model with their own number line and number bonds.

Show and do a close reading of the following story problem with students:

Wendy the pirate woke up in the night and saw some whales swimming around the boat. After a while, she saw 8 more whales.

Now there are 17 whales. How many whales did Wendy see the first time?

Model using a number line and number bond to write an addition expression and a subtraction expression while students model with their own number line and number bonds.

Activity 5: Pirates Practice

Distribute **Handout 8.1: Missing Number Practice** and tell students to practice individually to find missing addends and write addition and subtraction expressions. Instruct students to use addition and subtraction and the relationship between 3 numbers to draw a number bond to show their work (SMP.2).

Reflection and Closing: Exit Ticket

- ✓ Have students find the missing addends for the following expression and write a subtraction expression with the numbers:

$$12 + \underline{\quad} = 20$$

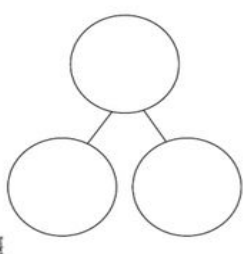
Homework

Distribute **Handout 8.2: Missing Numbers Homework** and tell students they will solve 2 story problems finding all 3 numbers and drawing a number bond.

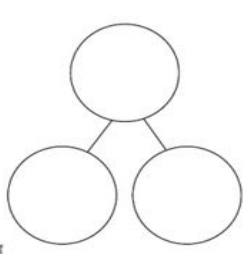
Handout 8.1: Missing Number Practice Page

Name _____ Date _____

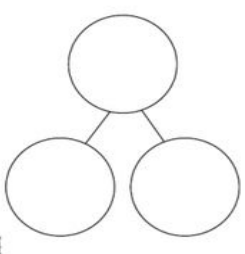
7 + _____ = 19 _____ - _____ = _____



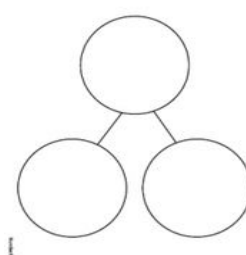
2 + _____ = 11 _____ - _____ = _____



_____ + 7 = 10 _____ - _____ = _____

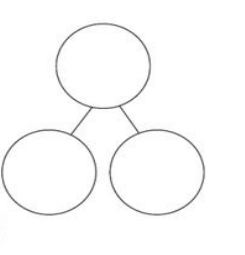


Peg Leg Pete had 20 ropes to coil. He coiled 9 ropes. How many more does he have to coil?



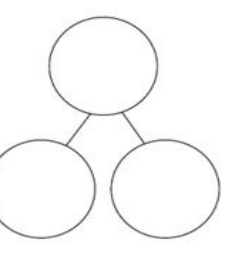
_____ + _____ = _____ _____ - _____ = _____

Blackbeard has 12 crew members. Some more pirates joined his crew. Now he has 18 crew members. How many pirates joined his crew?



_____ + _____ = _____ _____ - _____ = _____

Captain Hook captured 14 of Peter Pan's boys. Some of the boys escaped. There are 5 boys still being held by Captain Hook. How many boys escaped?



_____ + _____ = _____ _____ - _____ = _____

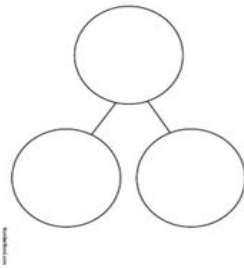
Handout 8.3: Missing Number Homework

Name _____ Date _____

Directions: Read the story. Write a number sentence for addition and subtraction. Fill in the number bond to show your numbers.

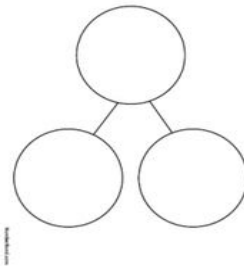
Captain Patch has 13 parrots. 5 of the parrots are boys and the others are girls.
How many parrots are girls

_____ + _____ = _____ _____ - _____ = _____



Blackbeard's crew found 17 coins on the island. 9 of the coins were silver and the others were gold. How many gold coins did Blackbeard's crew find on the island?

_____ + _____ = _____ _____ - _____ = _____



For training or questions regarding this unit,
please contact:

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