

Title: Investigating Integers, an Introduction

Brief Overview:

This lesson will prepare students to work with integers by comparing and computing with them. They will recall the concept of additive inverse as well as apply commutative and associative properties to evaluate expressions using integers. Students will use horizontal number lines and/or thermometers to examine the movement between positive and negative numbers to understand changes in temperature, altitude, sea level, bank accounts, stock markets, yardage in football plays and other real life situations.

NCTM Content Standard/National Science Education Standard:

To develop meaning for integers and represent and compare quantities.
To use the associative and commutative properties of addition and multiplication and the distributive properties of multiplication over addition to simplify computations with integers.

Grade/Level:

Grades 6-8

Duration/Length:

Four 40-50 minute classes.

Student Outcomes:

Students will:

- recognize integers as whole numbers and their opposites.
- find absolute value of integers.
- compare and order integers.
- solve problems using addition, subtraction, multiplication and division.

Materials and Resources:

Worksheets with Answer Keys

Worksheet A – Lesson 1

Worksheet B – Lesson 2

Worksheet C – Lesson 2

Worksheet D – Lesson 3

Teacher Tools

Lesson 4 Preassessment

Bingo Template

Bingo Callout Sheet

Colored math tiles.

Integer Land Template

Number line template

Internet (optional)

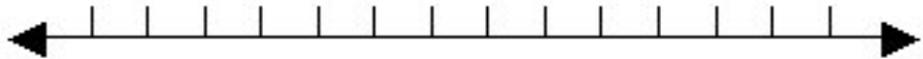
Algebra Tiles (optional)

Development/Procedures:

Lesson 1 (Absolute Value / Recognizing Negative and Positive Integers)

Preassessment - Students will have knowledge of basic math problem solving using addition, subtraction, multiplication and division of whole numbers.

Launch – Line up seven students in the front of the classroom. Each student will hold a large number. The student on the left will hold a negative 3; the student to the right of that holds a negative 2; and so on, in order, forming a human number line with zero in the middle.



Order of class is Jen, Mike, Amy, Tom, Gerry, Susan, Bob

The teacher now asks the class: “Who is further away from Tom, Jen (-3) or Gerry (+1)”? “Does the sign that they are holding make a difference in determining who is further from Tom”? The teacher can ask again using different students.

Teacher Facilitation – Part 1. Discuss the use of a number line that we will use in subsequent lessons for adding and subtracting integers. Relate the concept of absolute value being the distance from point zero. Recall the human number line when used to start the class. Show students how absolute value is written, $|-14|$. Write examples of absolute value on the board, asking students for answers.

$$|-12|$$

$$|+7|$$

$$|0|$$

Teacher Facilitation – Part 2. Ask students to think of situations that cannot be easily understood using positive numbers. Write all responses on the board. Answers might include temperature that is below zero, debt, measuring below sea level, etc. Instruct students that integers are whole numbers and their opposites. Use a number line to compare integers.

Student Application – Hand out worksheet A.

Embedded Assessment – Instructor should circulate amongst students while they are completing the worksheets. Bring to the class’ attention anything that is giving many students trouble. Discuss the answers they got. Determine each student’s progress toward understanding of the concept. Build this assessment into each part of the lesson.

Reteaching/Extension – Place students in small groups to begin creating 3 to 4 problems that involve use of integers and absolute values. These groups will then swap their questions with another group and work on them together. During this time the teacher should work with students who need reteaching.

Extra Activity

Go around the class pointing to each student saying 1, 2, 1, 2 etc. All the ones will stand when Carl's transaction can be written as a positive, and the twos will stand anytime it is negative.

Carl owed his mom \$27. (-27)

So he decided to get a job so he could pay her back. On his way to the pet store to apply for a job as dog groomer, he found a dollar bill. $(+1 + -27 = -26)$.

It was his lucky day because he also got the job. The manager told him that he would have to buy an apron with the store's name on it. It cost \$12. $(-12 + -26 = -38)$

On the first day of work, Carl got a \$4 tip for clipping Fifi's nails. $(+\$4 + -38 = \$-34)$

However Fifi left a sizable, deep scratch in Carl's arm that needed to be stitched by a doctor costing him \$50. $(-50 + -34 = -84)$

A few days later, Carl's friend came by and returned \$10 that he owed him. $(+10 -84 = -74)$

Carl's grandma forgot his birthday last month and sent him a check today for \$50. $(+50 + -74 = -24)$

In the middle of the week, Carl forgot to bring his lunch and had to buy it. It cost \$5. $(-5 + -24 = -29)$

Late in the week, Carl was not paying attention and stepped on his brother's CD. He had to buy him a new one for \$13. $(-13 + -29 = -42)$

Finally, Carl got his first paycheck, \$56. $(+56 - 42 = +12)$ Yippee thought Carl, I finally am out of debt and even have some cash in my wallet.

Then he dropped his wallet that fell into the sewer and disappeared from sight. $(+12 - 12 = 0)$.

The end.

Lesson 2 (Addition)

Preassessment – Students will recognize the set of integers and have an understanding of absolute value from the previous lesson.

Launch – Algebra tiles can be used for this exercise if you have them. Other wise, give each pair of students a page of 10 white circle tiles and 10 black (or filled in) circle tiles to cut out. Explain that each white tile equals positive one, +1. Each black tile equals negative one, -1. Since one white tile and one black tile are opposites, they form a zero pair.

For clarification: If a person climbs up one step on a ladder, we could use +1. When he comes down one step on the ladder, we could use -1. Then, he is at zero or, $(+1) + (-1)$ is zero. An additive inverse is the opposite. The additive inverse of negative one is positive one.

The Zero Property of Addition: the sum of an integer and its additive inverse is 0.

$$a + (-a) = 0 \text{ and } -a + a = 0$$

$$6 + (-6) = 0 \text{ and } -6 + 6 = 0$$

Teacher Facilitation, Part 1 – Write a number sentence on the board, $(+6) + (-2)$. Draw 6 circles on the board in a vertical row. Next, draw two filled in circles underneath. Ask students to arrange their tiles in the same way at their desks. Draw ring around one white circle in the top row and one dark circle in the bottom row showing how they form a zero pair. Repeat with the second zero pair. Ask, "What is left?" Four white circles or, +4. Repeat this exercise with $(+3) + (-4) =$. Let them arrange their tiles to show that the answer is negative one. Once again, show the students how to use the tiles to represent $(-3) + (-4) = -7$.

Student Application – Now write the following 6 problems on the board:

a. $(+6) + (-6) =$ b. $(+13) + (-2) =$ c. $(-1) + (+4) =$

d. $(+5) + (+2) =$ e. $(-5) + (+2) =$ f. $(-5) + (-2) =$

Embedded Assessment – Choose students to go up to the board and draw circle tiles to illustrate how they solved these problems.

Extension – Ask students if they have seen anything occur in these equations that suggests a rule about adding integers. Listen to all suggestions. Relate the following rules and show how they are true by looking back to the problems they have worked on.

ADDING INTEGERS WITH THE SAME SIGN

- ❖ Add the absolute value of the two numbers.
- ❖ Use the sign of the numbers.

ADDING INTEGERS WITH OPPOSITE SIGNS

- ❖ Subtract the number with the smaller absolute value from the number with the larger absolute value.
- ❖ Take the sign of the number with the larger absolute value.

Teacher Facilitation, Part 2 - Remind students of the Commutative and Associative properties of addition. These properties are useful when working with integers as well.

Commutative property	Associative Property
$a + b = b + a$	$(a + b) + c = a + (b + c)$
$6 + 4 = 4 + 6$	$(6 + 4) + 3 = 6 + (4 + 3)$

Write on the board $(-6) + (+3) + (+4) + (+6) + (-4) =$. Ask how we could apply the commutative property to this problem.

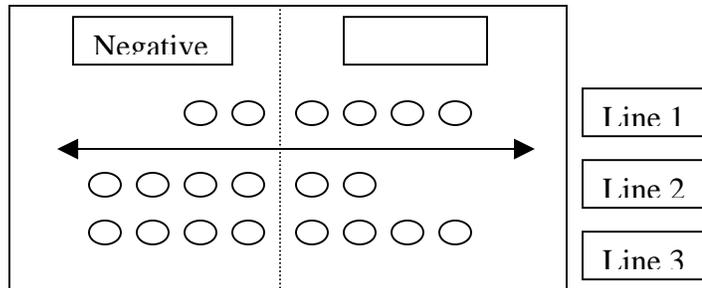
Rewrite the problem: $(-6) + (+6) + (+4) + (-4) + (+3) =$. You can circle the additive inverses and solve. The answer is 3. You can also regroup integers with the same sign together and then solve.

For advanced students, give handout Worksheet B.
For reteaching, begin homework assignment, Worksheet C.

Lesson 3 (Manipulation of Subtraction using Positive and Negative Integers)

Preassessment/ Launch – We are going to take a trip today. We live in the land of Positive Integers, but we want to become world travelers and so...we are going to pack our bags and go to the land of Negative Integers.
Review The Zero Property of Addition: the sum of the integer and its additive inverse (opposite) is zero.

Manipulative Activity #1:



Line 1 should be used as an example since we know we can calculate $4 - 2$ easily. It should be explained that the 2 negatives cancel 2 of the positives and 2 positives are left on the positive side. The teacher should make sure they understand how to write it in symbols and words. Line 2 and 3

should be done individually writing it out symbolically and written. The teacher can walk around and assess quickly through symbolic representation whether or not they can see negatives as being similar to positives. Students who get it quickly can then work given symbolic representation or written, placing their chips and drawing it on their board.

Line 1: Symbolic Representation

$$(+4) + (-2) = +2$$

Written Representation

A positive 4 added to a negative 2 is equal to a positive 2.

Line 2: Symbolic Representation

$$(-4) + (+2) = -2$$

Written Representation

A negative 4 plus a positive 2 is equal to a negative 2.

Line 3: Symbolic Representation

$$(-4) + (+4) = 0$$

Written Representation

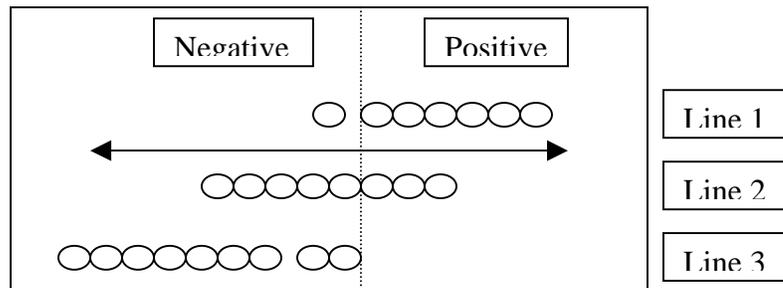
A negative 4 plus a positive 4 cancel and thus is equal to 0.

Other examples to place on the board as they finish.

$$(-1) + (+6) = ? \quad \text{Answer: } +5 \quad \text{Line 4}$$

$$(+3) + (-5) = ? \quad \text{Answer: } -2 \quad \text{Line 5}$$

$$(-7) + (-2) = ? \quad \text{Answer: } -9 \quad \text{Line 6}$$



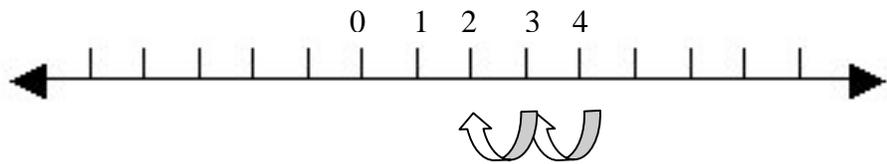
Teacher Facilitation – So what can we see through these cancellations of how it works with Positive and Negative numbers when adding them? Let the students come up with various observations and guide the discussion.

Presentation of the new concept.

Now can we write with symbols $(+4) + (-2)$? Yes we can. We can say 4-2.

What did we have to change in the symbols? Take away the parenthesis and instead of adding a negative we are subtracting.

Which way on the number line did we move? Teacher should draw a number line and jump the dot. To the left.



Now let us try writing $(-4) + (+2)$ differently. $-4+2$. Now we're adding so which way do we move on the number line? To the right. Again show through moving on the number line. Now let us try $(+4) + (-4)$ differently. $+4 - 4$. We are subtracting four from four so we are moving left. Draw it on the number line.

For the following expressions, draw the number line on the board and students should show where to begin and where the arrow should go on the number line. Students should be able to represent the expressions on the number line relating subtraction as they have previously calculated to really **adding** the opposite of the negative number.

If the student sees the equation $-7-2 =$, he should interpret this to be the same as $(-7) + (-2) =$

$$1-6 = (+1) + (-6) = -5$$

$$-3-5 = (-3) + (-5) = -8$$

Student Application and Embedded Assessment– Students will use the Balancing My Checkbook worksheet to practice balancing a checkbook going into the negative numbers. Teachers may need to briefly explain where the information is found on the check (date, check number, transaction, and amount) as well as explaining what Debit (take away) and Credit (add) means.

Reteaching/Extension –

- Have students collect data on temperatures outside over the fall (Start in September for more data). Have them use Celsius degrees. Then have them find the difference between certain periods. Or have them subtract a certain number to figure out what would be today's temperature.
- For those who understand, add in bigger numbers, fractions, or decimals depending on their level.
- Students benefit from trying hands on applications. The following websites offer online manipulatives that may help students see relationships between the numbers more clearly.

For students struggling:

Number lines on <http://ambleweb.digitalbrain.com/ambleweb/ambleweb/numeracy.htm>

Number Line Bounce under Number and Operations on <http://matti.usu.edu/nlvm/nav/index.html>

For students advancing:

Circle 0 and Circle 99 under Number and Operations on <http://matti.usu.edu/nlvm/nav/index.html>

Lesson 4 (Multiplication/Division)

Preassessment/Launch - As a warm-up, put the following written statements on the board and have the students write the numerical equation.

Getting six dollars three times is getting eighteen dollars. Paying a six-dollar penalty three times is a eighteen-dollar penalty. Not getting six dollars three times is not getting eighteen dollars. Not paying a six-dollar penalty three times is getting eighteen dollars.

Answers:

$$3 * 6 = 18$$

$$3 * (-6) = -18$$

$$(-3) * 6 = -18$$

$$(-3) * (-6) = 18$$

Teacher Facilitation

Why is not paying a six-dollar penalty three times actually getting eighteen dollars?

Because if you are not supposed to have the money but you have it anyway, you are actually getting \$18 dollars.

Have the students try to brain storm some other ideas of similar situations.

Teacher Explanation

From our example above we can see then that taking the numerical representations, that what is true when we multiply a negative and a positive (not mattering which is first)? We can conclude that a negative times a positive is a negative.

From our example above we can see that taking the numerical representations, that what is true when we multiply a negative times a negative that we get what kind of a number? We can conclude we will always get a positive number.

An easy way to remember... a + symbol is made of 2 line segments and a - is made of 1 line segment. If in an equation there are 2 negative

numbers or anything divisible by 2, we will get a positive number. If we have an odd number of negative numbers we will get a negative number.

**Student Application
and Embedded
Assessment**

Integer
Bingo:
Students

MULTIPLYING AND DIVIDING INTEGERS

- ❖ When multiplying or dividing two integers that have the same sign, the answer will be positive.
- ❖ When multiplying or dividing two integers with opposite signs, the answer will be negative.

should fill in the template with numbers between -20 and 20 including 0. Teacher then can call out multiplication, division, addition, subtraction, and absolute value expressions that students must solve. All students should have 12 negative integers, 12 positive integers, and a zero on their card.

Reteaching/Extension

- Show a pattern to the students, and ask them to come up with the next number in the pattern.
 - Example:
 $+3 * -3 = -9$
 $+2 * -3 = -6$
 $+1 * -3 = -3$
 $0 * -3 = 0$
 $-1 * -3 = 3$
 $-2 * -3 = 6$
 $-3 * -3 = ?$

Summative Assessment:

Students play Bingo in Lesson 4. Teacher would ask students either then or when playing again for the students to write down the expressions given with the answer as they go through the game. Teacher would then collect their work to assess understanding, and a grade will be assigned as points correct out of total number of expressions called out by the teacher.

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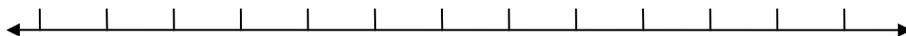
Worksheet A

Integers are whole numbers and their opposites.

Positive numbers are greater than zero. (+4, +38, + 479)

Negative numbers are less than zero. (-2, -44, -702)

Absolute value is the distance a number is from zero.



1. Use the number line. Circle the number that is greater.

a. -1 or +2

b. -4 or -6

c. -17 or -16

2. Find each absolute value.

a. $|19|$ _____ b. $|-2|$ _____ c. $|-205|$ _____ d. $|6-3|$ _____

3. Fill in the blank with $<$ $>$ or $=$

a. $\$7$ _____ $|\$7|$ b. -3 _____ 0 c. $|-6|$ _____ 5

4. Place the following integers on the number line: 3, -4, 0, 4, 1, -5, -2,



5. Name two situations where you would use a negative number to describe an event?

6. Carol and Tom invested in the stock market. Carol invested \$225. After 1 month, her stock went down to \$185. Tom invested \$380. After one month, his stock went up to \$440. Using absolute value, determine who had the greatest change in their stock investments.

7. These are the low temperatures one week in Duluth, MN.

Order these integers from least to greatest. 15° , -2° , -7° , 9° , 4° , 0° , -8° ,

Worksheet A

Integers are whole numbers and their opposites.

Positive numbers are greater than zero. (+4, +38, +479)

Negative numbers are less than zero. (-2, -44, -702)

Absolute value is the distance a number is from zero.



1. Use the number line. Circle the number that is greater?

a. -1 or +2

b. -4 or -6

c. -17 or -16

2. Find each absolute value.

a. $|19|$ 19 b. $|-2|$ 2 c. $|-205|$ 205

d. $|6-3|$ 3

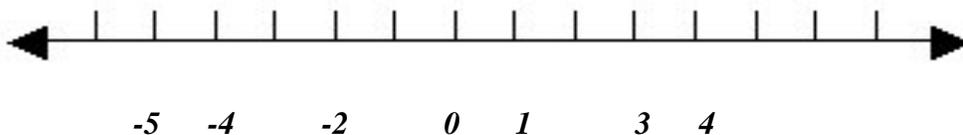
3. Fill in the blank with $<$ $>$ or $=$

a. $\$7$ $=$ $|\$7|$

b. -3 \leq 0

c. $|-6|$ \geq 5

4. Place the following integers on the number line: 3, -4, 0, 4, 1, -5, -2,



5. Name two situations where you would use a negative number to describe an event?

Answers will vary. Possible answers: debt, temp. below zero, below sea level

6. Carol and Tom invested in the stock market. Carol invested \$225. After 1 month, her stock went down to \$185. Tom invested \$380. After one month, his stock went up to \$440. Using absolute value, determine who had the greatest change in their stock investments. **Carol had a change of $|-40|$, Tom had a change of $|+60|$, Tom's change is greater.**

7. These are the low temperatures one week in Duluth, MN. Order these integers from least to greatest. 15° , -2° , -7° , 9° , 4° , 0° , -8° **-8° , -7° , -2° , 0° , 4° , 9° , 15°**

Worksheet B

At Sports Kingdom bats regularly sell for \$68. Today Carlos went to Sports Kingdom because all baseball bats were on sale for \$6 off. Last week baseball bats were on sale for \$65.

Write \$6 off as an integer. _____

If the cost of the bat is written in integers, and Carlos buys the bat today, what would the equation be?

a. $(+68) + (+65) =$

b. $(+65) + (-6) =$

c. $(+68) + (-6) =$

d. $(68) + (6) =$

Should Carlos have bought the bat last week? Why or why not? Explain.

Write 2 word problems using addition of positive and negative numbers. Share them with someone near you. Find the answers to the new word problems you get.

Worksheet B

At Sports Kingdom bats regularly sell for \$68. Today Carlos went to Sports Kingdom because all baseball bats were on sale for \$6 off. Last week baseball bats were on sale for \$65.

Write \$6 off as an integer. -6

If the cost of the bat is written in integers, and Carlos buys the bat today, what would the equation be?

- a. $(+68) + (+65) =$ *no*
- b. $(+65) + (-6) =$ *no*
- c. $(+68) + (-6) =$ *yes*
- d. $(68) + (6) =$ *no*

Should Carlos have bought the bat last week? Why or why not? Explain.

No, last week a bat would cost \$65. This week at $(+68) + (-6)$, the cost would be \$62. Sixty-two dollars is cheaper than sixty-five dollars.

Write 2 word problems using addition of positive and negative numbers. Share them with someone near you. Find the answers to the new word problems you get. *Answers will vary.*

Worksheet C

The opposite of a number is called its additive inverse.

- Which integer would best describe each situation?
 - 35 degrees below 0
 - a penalty of 15 yards
 - receiving a \$6 tip
 - borrowing \$17
 - diving 30 feet under water
- Use rules for adding integers with opposite signs:
 - $(+2) + (-3) =$
 - $(-6) + (+4) =$
 - $(+7) + (-11) =$
 - $(-14) + (+7) =$
 - $(+22) + (-17) =$Use rules for adding integers with the same sign:
 - $(+2) + (+3) =$
 - $(-2) + (-3) =$
 - $(-5) + (-6) + (-2) =$
- Use the commutative property to rewrite these problems. Group additive inverses together and group integers with the same sign together. Then solve.
 - $(+6) + (+2) + (-6) =$
 - $(-11) + (-7) + (-11) + (+7) =$
 - $(-8) + (+7) + (+1) + (+8) + (-9) + (-1) + (+6) =$
 - $(-4) + (+6) + (+9) + (-10) =$
- Add. (Use the same rules of adding integers).
 - $(+24) + (+78) =$
 - $(-24) + (+78) =$
 - $(+78) + (-24) =$
- Word problems.
 - When Rebecca woke up at 6 AM to feed the chickens, the temperature was -2°F . At 11:30 AM, the sun had warmed things up by 22°F . What was the temperature at 11:30 AM? Write a number sentence and solve.
 - John entered the elevator and went down 9 floors. He had intended to go up, so he stayed on and went up 12 floors. Write a number sentence to show how many floors John ascended from the start.
 - Judy has only \$82 in her bank account which is below the minimum balance. The bank adds a \$10 charge. Write an equation showing what happened to her account and what she has left now.

Worksheet C

The opposite of a number is called its additive inverse.

1. Which integer would best describe each situation?

a. 35 degrees below 0 -35°

d. borrowing \$17 $-\$17$

b. a penalty of 15 yards -15

e. diving 30 feet under water -30

c. receiving a \$6 tip $+\$6$

2. Use rules for adding integers with opposite signs:

a. $(+2) + (-3) = -1$

b. $(-6) + (+4) = -2$

c. $(+7) + (-11) = -4$

d. $(-14) + (+7) = -7$

e. $(+22) + (-17) = +5$

Use rules for adding integers with the same sign:

a. $(+2) + (+3) = +5$

b. $(-2) + (-3) = -5$

c. $(-5) + (-6) + (-2) = -13$

3. Use the commutative property to rewrite these problems. Group additive inverses together and group integers with the same sign together. Then solve.

a. $(+6) + (+2) + (-6) = (+6) + (-6) + (+2) = +2$

b. $(-11) + (-7) + (-11) + (+7) = (-11) + (-11) + (-7) + (+7) = -22$

c. $(-8) + (+7) + (+1) + (+8) + (-9) + (-1) + (+6) =$
 $(-8) + (+8) + (+7) + (+1) + (+6) + (-9) + (-1) = +4$

d. $(-4) + (+6) + (+9) + (-10) = (-4) + (-10) + (+6) + (+9) = +1$

4. Add. (Use the same rules of adding integers)

a. $(+24) + (+78) = +102$ b. $(-24) + (+78) = +54$ c. $(+78) + (-24) = +54$

5. Word problems.

a. When Rebecca woke up at 6 AM to feed the chickens, the temperature was -2°F . At 11:30 AM, the sun had warmed things up by 22°F . What was the temperature at 11:30 AM? Write a number sentence and solve. $(-2) + (+22) = +20, +20$

b. John entered the elevator and went down 9 floors. He had intended to go up, so he stayed on and went up 12 floors. Write a number sentence to show how many floors John ascended from the start.
 $(-9) + (+12) = +3, +3$

c. Judy has only \$82 in her bank account which is below the minimum balance. The bank adds a \$10 charge. Write an equation showing what happened to her account and what she has left now.
 $(+82) + (-10) = +72, \$72$

Balancing my Checkbook

Worksheet D

Date	Check #	Transaction	Debit	Credit	Balance
9/10	--	Paid	--	\$100	\$0
					\$100

1. September 10, you got paid \$100

5. September 17, you got paid \$100

2.

<i>Pay to the order of</i> Gas \$20 <u>Twenty and xx/100</u> _____
--

6.

<i>Pay to the order of</i> Haircut \$20 <u>Twenty and xx/100</u> _____
--

3

<i>Pay to the order of</i> Grocerv \$75 <u>Seventy-five and xx/100</u> _____
--

7.

<i>Pay to the order of</i> CD Plaver \$70 <u>Seventy and xx/100</u> _____

4.

<i>Pay to the order of</i> Cable \$50 <u>Fifty and xx/100</u> _____

8.

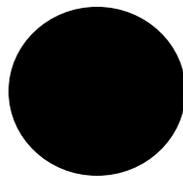
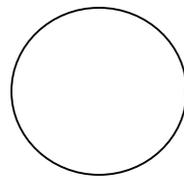
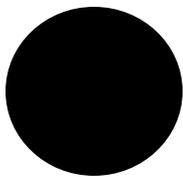
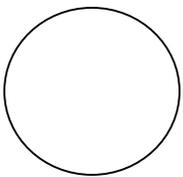
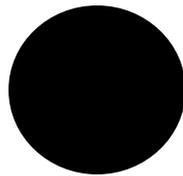
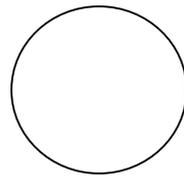
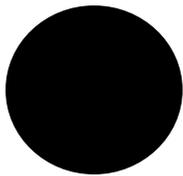
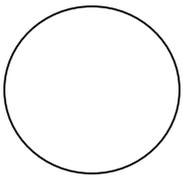
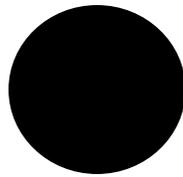
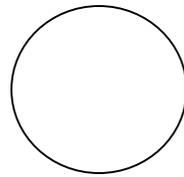
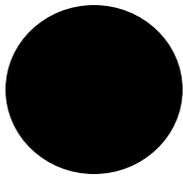
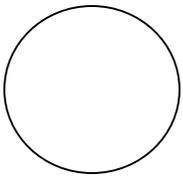
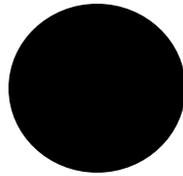
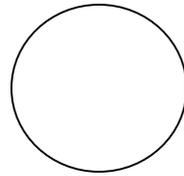
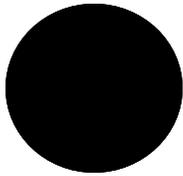
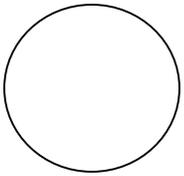
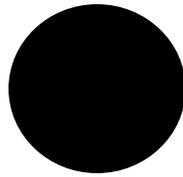
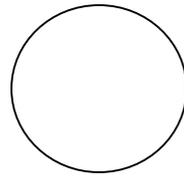
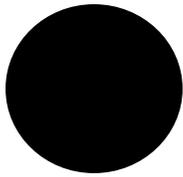
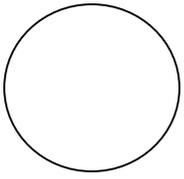
<i>Pay to the order of</i> Toothpaste \$5 <u>Five and xx/100</u> _____
--

Balancing my Checkbook

Answer Key

Date	Check #	Transaction	Debit	Credit	Balance
9/10	--	Paid	--	\$100	\$0
					\$100
9/11	101	Gas	\$20		-\$20
					\$80
9/13	102	Grocery	\$75		-\$75
					\$5
9/14	103	Cable	\$50		-\$50
					-\$45
9/17	--	Paid		\$100	+\$100
					\$55
9/18	104	Haircut	\$20		-\$20
					\$35
9/21	105	CD Player	\$70		-\$70
					-\$35
9/23	106	Toothpaste	\$5		-\$5
					-\$40

Colored Math Tiles



Lesson 4 Preassessment

Getting six dollars three times is getting eighteen dollars.

Paying a six-dollar penalty three times is an eighteen-dollar penalty.

Not getting six dollars three times is not getting eighteen dollars.

Not paying a six-dollar penalty three times is getting eighteen dollars.

B	I	N	G	O

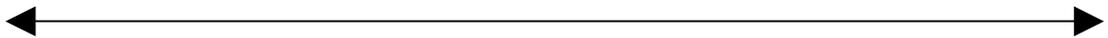
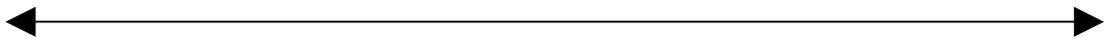
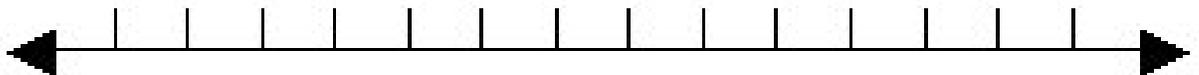
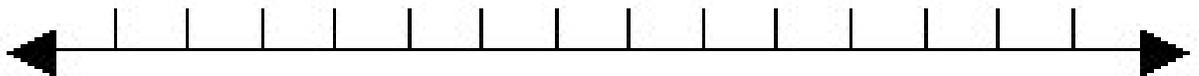
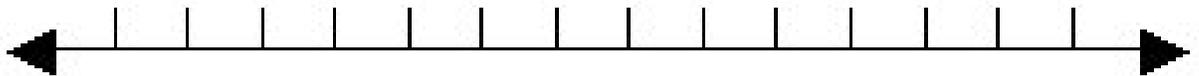
B	I	N	G	O

Callout expression and answers for BINGO

Here are some sample equations for what the teacher could call out for a Bingo game. Of course he or she could come up with more of his or her own.

$(-4) \times (-5) = 20$	$- (-9) = -9$
$(-3) \times (+5) = -15$	$(-28) + (+14) = -14$
$(-30) \div (+5) = -6$	$(+50) \div (-5) = -10$
$(-3) + (12) = 9$	$(+7) - (+12) = -5$
$ (+15) = +15$	$(-35) + (+36) = +1$
$(10) \times (-10) + 83 = -17$	$(-8) + (-8) = -16$
$(13) - (-5) = 18$	$(-2) \times (-10) = -20$
$(+20) \div (-5) = -4$	$(+6) \times (-3) = -18$
$ (-3) = +3$	$(+57) \div (-3) = -19$
$(+16) + (-5) = 11$	$(-18) + (+18) = 0$
$(+5) \times (-2) = -10$	$(-7) + (-2) = -9$
$(-19) - (-7) = -12$	$- (+11) = -11$
$- (2) = -2$	$(-42) \div (-6) = +7$
$(+31) - (+12) = +19$	$(-3) \times (+6) = -18$
$(-24) + (+10) = +14$	$(-3) \times (-3) = 9$
$(-25) \div (-5) = +5$	$ (-2) = +2$
$(+20) - (+8) = 12$	$(-19) + (+12) = -7$
$(-6) - (+7) = -13$	$(-5) - (-4) = -1$
$(-2) \times (-4) = 8$	$(-2) - (-19) = +17$
$(-32) \div (-2) = +16$	$((-12) \times (0)) + 13 = +13$
$(-1) + (-2) = -3$	$(-12) + (+18) = +6$
$((-6) \times (+6)) + 40 = +4$	

Number Lines for Notes



Land of Negative Integers

Land of Positive Integers

