ADDING INTEGERS

MODELING WITH A NUMBER LINE

DISTANCE   DISTANCE

$-3 + 8$

DIRECTION   DIRECTION

-5 -4 -3 -2 -1 0 1 2 3 4 5
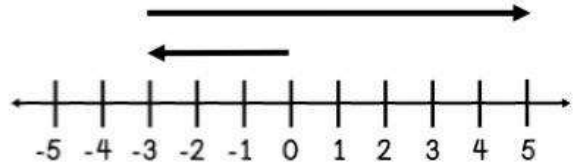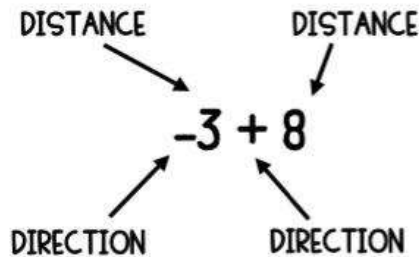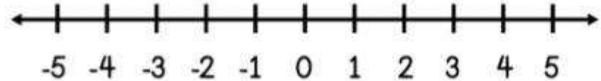
Use the number line to model and solve the addition problems below.

1.
$$-1 + 4 =$$

-5 -4 -3 -2 -1 0 1 2 3 4 5

2.
$$1 + (-4) =$$

-5 -4 -3 -2 -1 0 1 2 3 4 5

3.
$$-1 + (-4) =$$

-5 -4 -3 -2 -1 0 1 2 3 4 5

4.
$$1 + 4 =$$

-5 -4 -3 -2 -1 0 1 2 3 4 5
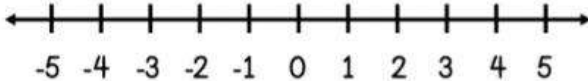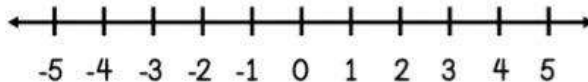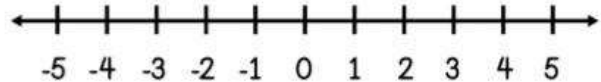
5. Explain any additional patterns that you notice from the problems above.

_____

_____

ADDING INTEGERS

- If the two values have the same sign, then _____ and use the same sign.

  positive + positive = positive   Ex: $6 + 5 = 11$
  negative + negative = negative   Ex: $-6 + (-5) = -11$

- If the signs are _____, then _____ and take the sign of the number with the greatest absolute value.
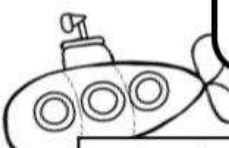
  Ex: $6 + (-5) = 1$ Ex: $-6 + 5 = -1$

Practice adding integers. Then, find the sum of each column, checking your answer with the provided sum.

A	B	C	D
-9 + 6 =	7 + (-3) =	-11 + 5 =	-6 + (-8) =
4 + 7 =	1 + (-9) =	-5 + (-9) =	3 + 9 =
-7 + 12 =	2 + (-6) =	11 + (-5) =	-10 + (-5) =
SUM: 13	SUM: -8	SUM: -14	SUM: -17

As you apply integer operations to real-world situations, consider asking yourself the following questions to guide your thinking and determine reasonableness for your solutions.

What value are you _____ with?

What value do you also know and what does it _____?

Does your solution make sense in the context of the _____?

6. A submarine is traveling 200 feet below sea level. It then ascends 75 feet. What is the new position of the submarine? Write and solve an equation to represent the situation.

7. A scuba diver dove 40 feet below the surface of the water. He then dove an additional 17 feet. What is the depth of the scuba diver now? Write and solve an equation to represent the situation.

8. Three friends are playing a card game. To start, each player draws four cards. The player with the largest sum goes first. Which player should go first?

DEENA
6, -9, 7, -5

CORY
5, 3, 0, -6

MALCOM
11, -12, -3, 4

Summarize today's lesson: