INCLUSION IN TEXAS

Instructional Routines for Mathematics Intervention

The purpose of these mathematics instructional routines is to provide educators with materials to use when providing intervention to students who experience difficulty with mathematics. The routines address content included in the grades 2-8 Texas Essential Knowledge and Skills (TEKS). There are 23 modules that include routines and examples – each focused on different mathematical content. Each of the 23 modules include vocabulary cards and problem sets to use during instruction. These materials are intended to be implemented explicitly with the aim of improving mathematics outcomes for students.

TEA
Texas Education Agency

Instructional Routines for Mathematics Intervention

MODULE 17

Integers

Module 17: Integers
Mathematics Routines

A. Important Vocabulary with Definitions

Term	Definition
absolute value	The distance of a number from 0 on a number line.
integer	A positive or negative whole number.
negative number	Any number less than 0.
number line	A straight line with numbers placed at equal intervals along its length.
opposites	Two numbers that are equal distance from 0 on a number line.
positive number	Any number greater than 0.
zero pair	A pair of numbers with a sum of 0.

B. Background Information

In this module, we focus on integers. An integer is a positive or negative whole number. We use the following different models to help students understand integers: (1) Number Line, (2) Two-Color Counters, and (3) Positive and Negative Mat with Cubes.

When referring to integers, be sure to emphasize that numbers without a negative symbol (-) are assumed positive. So:

7 is “positive seven” or “seven.”

-7 is “negative seven.”

Be sure to use the negative symbol (-), instead of a minus sign (–), for representing negative numbers.

Emphasize *zero pairs* when teaching integers. A zero pair is a pair of numbers with a sum of 0. So, -7 + 7 = 0.

Students	Negative.
Teacher	**Because this number is negative, we'll place the cubes on the negative side. We need to show -6, so let's show 6 cubes on the negative side of the mat. Count with me.**
Students	1, 2, 3, 4, 5, 6.
Teacher	**So, we showed -6. What number did we show?**
Students	-6_.
Teacher	**Excellent! Using the positive and negative mat helps you show positive and negative integers. How can you use the mat to show integers?**
Students	You use the cubes and place positive integers on the positive side of the mat. You use the cubes and place negative integers on the negative side of the mat.

D. Problems for Use During Instruction

See Module 17 Problem Sets.

E. Vocabulary Cards for Use During Instruction

See Module 17 Vocabulary Cards.

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Module 17:

Integers

Problem Sets

A. Positive integers (30)
B. Negative integers (30)

A.

3

A.

26

A.

10

A.

4

A.

14

A.

24

A.

9

A.

15

A.

2

A.

13

A.

17

A.

5

A.

19

A.

16

A.

12

A.

29

A.

20

A.

1

A.

18

A.

27

A.

25

A.

6

A.

11

A.

22

A.

28

A.

23

A.

8

A.

0

A.

21

A.

7

B.

-5

B.

-8

B.

-25

B.

-14

B.

-11

B.

-19

B.

-16

B.

-21

B.

-6

B.

-2

B.

-13

B.

-23

B.

-7

B.

-1

B.

-20

B.

-9

B.

-26

B.

-17

B.

-27

B.

-15

B.

-30

B.

-10

B.

-28

B.

-3

B.

-29

B.

-24

B.

-12

B.

-22

B.

-18

B.

-4

Module 17:

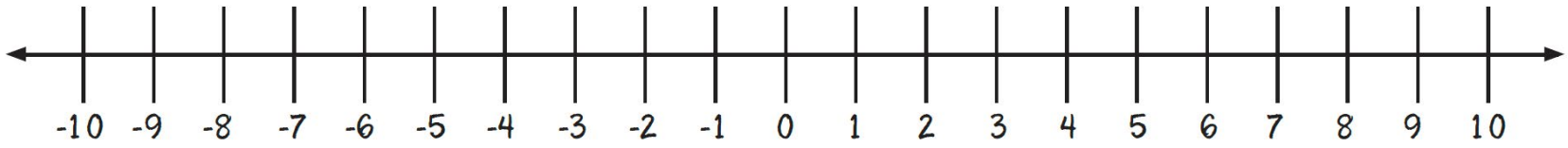
Integers

Vocabulary Cards

absolute value
integer
negative number
number line
opposites
positive number
zero pair

absolute value

The distance of a number from 0 on a number line.



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integer

A positive or negative whole number.

-3 -2 -1 1 2 3

negative number

Any number less than 0.

-3 -2 -1

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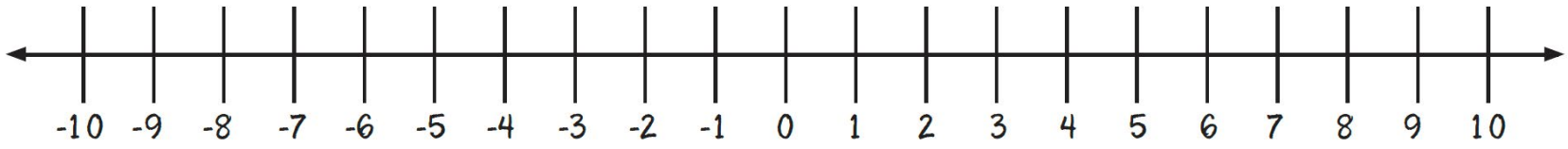
number line

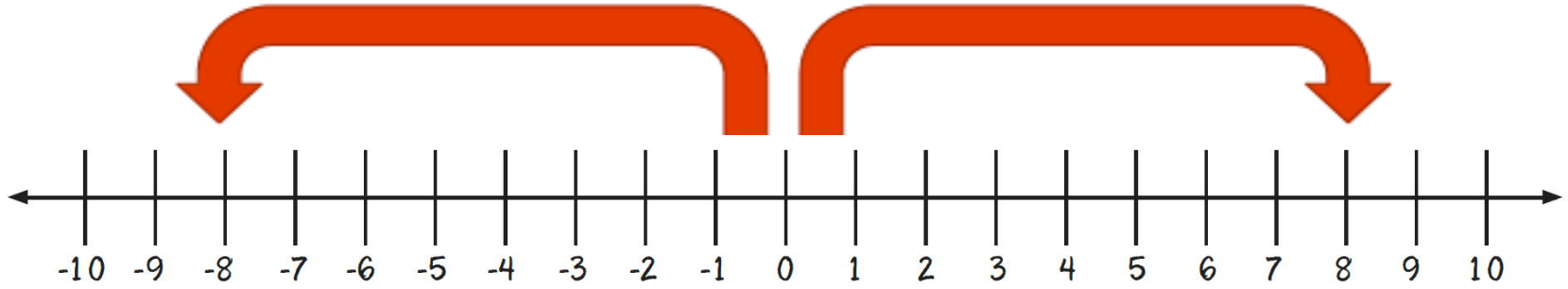
A straight line with numbers placed at equal intervals along its length.



opposites

Two numbers that are equal distance from 0 on a number line.

-8 and 8 are opposites



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positive number

Any number greater than 0.

1 2 3

zero pair

A pair of numbers with a sum of 0.

$$-7 + 7 = 0$$