



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.

Instructional Routines for Mathematics Intervention

MODULE 16

Representing Decimals



Module 16: Representing Decimals

Mathematics Routines

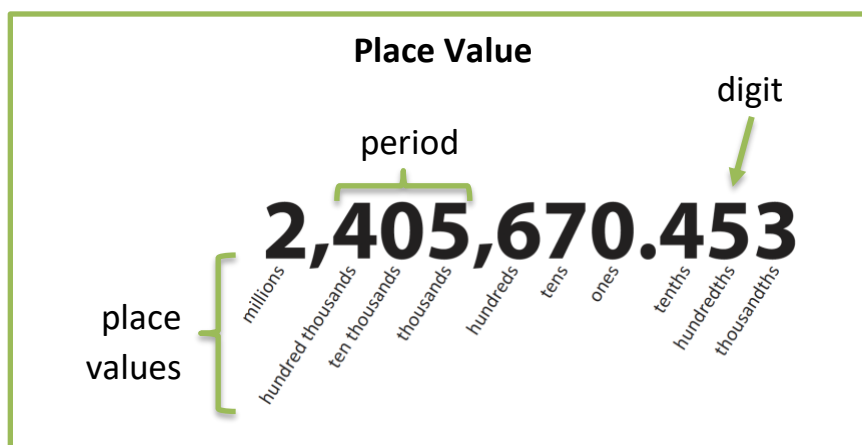
A. Important Vocabulary with Definitions

Term	Definition
decimal	A number based on powers of ten.
decimal point	A dot used to separate ones from tenths in a number or dollars from cents.
hundreds	The digit representing 100.
hundredths	The digit representing $1/100$.
ones	The digit representing 1.
place value	The value of a digit depending on its place in a number.
tens	The digit representing 10.
tenths	The digit representing $1/10$.
thousands	The digit representing 1,000.
thousandths	The digit representing $1/1,000$.

B. Background Information

In this module, we focus on representing decimals. We use two models: (1) Proportional and (2) Non-Proportional.

When referring to decimals, be sure to emphasize place value.



A.

1.4

A.

3.1

A.

16.4

A.

1.8

A.

4.7

A.

8.9

A.

0.2

A.

48.7

A.

79.9

A.

8.2

A.

0.5

A.

93.7

A.

35.2

A.

81.8

A.

0.3

A.

87.2

A.

13.1

A.

36.4

A.

0.4

A.

27.5

B.

0.34

B.

1.52

B.

38.81

B.

2.28

B.

670.04

B.

9.18

B.

0.84

B.

6.19

B.

10.33

B.

89.51

B.

337.69

B.

2.48

B.

0.97

B.

67.23

B.

100.37

B.

0.62

B.

26.75

B.

4.24

B.

51.07

B.

206.36

c.

0.999

c.

2.319

c.

7.751

c.

86.621

c.

9.688

c.

0.617

c.

9.363

c.

33.546

c.

8.514

c.

1.438

c.

2.903

c.

411.523

c.

132.109

c.

0.003

c.

28.052

c.

8.181

c.

674.903

c.

6.813

c.

1.049

c.

234.615

Module 16: Representing Decimals

Vocabulary Cards

decimal

decimal point

hundreds

hundredths

ones

place value

tens

tenths

thousands

thousandths

decimal

A number based on powers of ten.

34.107

tens ones tenths hundredths thousandths

decimal point

A dot used to separate ones from tenths in a number or dollars from cents.

4.2

. is the **decimal point**

hundreds

The digit representing 100.

hundredths

The digit in representing $\frac{1}{100}$.

In the number 4.2**3**, **3** is in the hundredths place.

ones

The digit representing 1.

place value

The value of a digit depending on its place in a number.

thousands	hundreds	tens	ones	.	tenths	hundredths	thousandths
8	7	6	5	.	4	3	2

tens

The digit representing 10.

tenths

The digit in representing $\frac{1}{10}$.

In the number 4.23, 2 is in the tenths place.

thousands

The digit representing 1,000.

thousandths

The digit in representing $\frac{1}{1,000}$.

In the number 4.238, 8 is in the thousandths place.