

MID-YEAR REVIEW

The Mid-Year Assessment is scheduled for _____. Use this review to help you prepare for this assessment. Study the following vocabulary.

VOCABULARY: Sum, Difference, Product, Quotient, Repeating Decimal, Terminating Decimal, Dividend, Divisor, Power of 10, Numerical Expression, Algebraic Expression, Simplify, Evaluate, Translate, Operations, Variable, Term, Constant, Coefficient, Exponent, Base, Factor, GCF

DIRECTIONS: FIRST FILL IN THE THINK BOXES TO HELP YOU BEGIN THINKING ABOUT EACH PROBLEM. THEN, ANSWER THE FOLLOWING QUESTIONS REFERRING TO YOUR CLASS NOTES, IF NEEDED.

ROUNDING DECIMALS

1. Round the following numbers to the given place value.

a) 67.83; tenths

67.8

b) 123.9872; hundredths

123.99

Example Box:

FOUR OR LESS, LET IT REST
FIVE OR MORE, UP THE SCORE

Ex. 1 Round 50.67 to the tenths place.

Ex. 2 Round 1,655.4382 to the thousandths place.

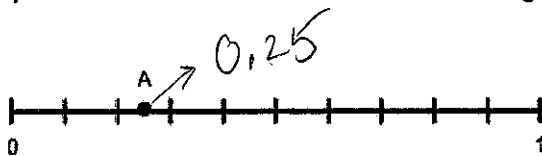
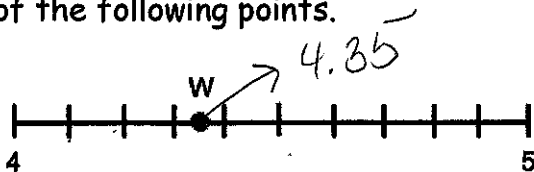
WRITING DECIMALS AND THE NUMBER LINE

2. Write the following decimals.

a) eighty-one thousandths 0.081

b) twenty and five hundredths 20.05

3. Label the tick marks. Determine the decimal value of each of the following points.



Think Box:

HOW MANY SECTIONS ARE THERE BETWEEN EACH WHOLE NUMBER?

WHAT VALUE DOES EACH TICK MARK REPRESENT?

WHOLE NUMBER DIVISION AND REMAINDERS

4. Samantha ordered 61 picture frames for her business. The frames are mailed in boxes that can each hold 7 frames. What is the least number of boxes that can be used to mail Samantha's picture frames?

9 boxes will be needed

Example Box:

Ex. How many groups of 9 apples are in 103? How many apples are remaining?

ADDING, SUBTRACTING, MULTIPLYING AND DIVIDING DECIMALS

5. Perform the following operations. Estimate, then find the exact answer. SHOW WORK.

a) $73.56 + 124 + 45.3$ Estimate: $70 + 120 + 45 = 235$

242.86

b) $12 - 7.89$

Estimate: $12 - 8 = 4$

4.11

c) 7.4×4.32

Estimate: $7 \times 4 = 28$

31.968

Example Box:

Ex. 1 $95.56 + 145.2 + 16$

Ex. 2 $200 - 124.6$

Ex. 3 5.6×1.24

d) ~~82,03 ÷ 0.3~~

Estimate 82 ÷ 1 = 82

82.23 ÷ 0.3

~~273.4~~ 274.1

Example Box:

Ex. 4 2.016 ÷ 0.4

How do you write a fraction as a decimal? Ex. $\frac{3}{4}$

6. Write $\frac{8}{11}$ as a decimal.

0. $\overline{72}$

POWERS OF 10

1. Write the following numbers using an exponent.

a) 10,000 10⁴

b) 100 10²

2. Write these powers of 10 in standard notation.

a) 10⁵ 100000

b) 10⁸ 100000000

3. Find the product or quotient,

a) 5.6 × 1000 5600

b) $\frac{40}{100}$ 0.40

Example Box:

Ex 1. Write 1,000 using an exponent.

Ex. 2 Write 10⁷ in standard form.

Ex. 3 USE THE POWER OF 10 RULES to find the product or quotient.

30 × 10,000

4.5 ÷ 10

ORDER OF OPERATIONS

1. EVALUATE THE FOLLOWING NUMERICAL EXPRESSIONS USING THE ORDER OF OPERATIONS.
USE THE FUNNEL METHOD.

a. $18 - 3(2 + 3) \div 5$

15

b. $3(17 - 14 + 6 \times 2)$

45

c. $(2^5 - 2 \times 10)^2$

144

d. $4(5) + 3^2 - 1$

28

e. $4(8 + 16 \div 4^2)$

36

f. $20 - (10 + 2.67)$

7.34

g. $5(7.4)(10)$

~~370~~

370

Example Box:

Ex. $3(8 + 32 \div 4^2)$

Ex. $20 \div 2(5) + 9 - 1$

TRANSLATING

2. Write an algebraic expression for each word phrase below.

a. The quotient of a five and a number

$$5 \div x \text{ or } \frac{5}{x}$$

b. A number less than two hundred sixty

$$260 - x$$

c. Half of a number

$$\frac{1}{2}x \text{ or } \frac{x}{2}$$

d. The sum of a number and sixteen thousandths

$$x + 0.016$$

e. The difference between a number and two

$$x - 2$$

f. The product of a number and two-tenths

$$0.2x \text{ or } \frac{2}{10}x$$

g. a number cubed

$$x^3$$

h. a number squared

$$x^2$$

Example Box

Translate.

Ex. 1 Four less than v

Ex. 2 A number minus 9

Ex. 6 The product of a number and 5

3. Translate the following word problem to an expression.

a. On Martin Luther King Day, Sam went snow boarding. He went down the mountain 14 times, while his older brother went down 18 times that day. Write a numerical expression to represent the difference between the two amounts of trips down.

$$18 - 14$$

PART IV: NUMBER THEORY

1. Determine if 102 is divisible by the values in the table below. Provide a reason or work to support your answer.

Divisible by...	Yes or No	Reason or Work
2	yes	even number
3	yes	$1+0+2 = 3$ $3 \times 6 = 3$
5	NO	does not end in 0 or 5
6	yes	$\begin{array}{r} 17 \\ 6 \overline{)102} \\ \underline{6} \\ 42 \\ \underline{42} \\ 0 \end{array}$ NO remainder!
7	NO	$\begin{array}{r} 14 \\ 7 \overline{)102} \\ \underline{7} \\ 32 \\ \underline{28} \\ 4 \end{array}$ Has a remainder!
10	NO	does not end in 0.

Example Box:

List the factors of 20.

Find the GCF of 48 AND 84 using THE BIRTHDAY CAKE METHOD (DIVISION LADDER)

2. Use Birthday Cake to find the GCF of 48 and 96.

$$\begin{array}{r} 4 \overline{)48 \ 96} \\ \underline{12 \ 24} \\ 1 \ 2 \end{array}$$

gcf = $4 \times 12 = 48$