

MasterMath

Name _____

Date _____

Rational and Irrational Numbers

1. Find the mean of this data set: 6, -8, 12, -10, -9, 3

-1

2. Simplify these expressions:

Expression	Simplified
$(4x - 6) \div 2$	$2x - 3$
$(-5a + 15) \div -5$	$a - 3$
$(-3z - 9) \div -\frac{1}{3}$	$9z + 27$
$(8z - 4) \div -2$	$2 - 4z$

3. Evaluate this expression when $x = -6$ and $y = -3$

$$\frac{-x - 4y}{xy}$$

1

4. Five skin divers each attempt to reach a deep reef in the Florida Keys. Their depths in feet below sea level were as follows: -28, -37, -18, -45, -62. What was the mean depth reached?

-31.67'

5. Is this number Rational or Irrational? Explain

.4968535743685221875....

Irrational. Non-repeating, Non-terminating decimals are irrational.

6. Are these two expressions equivalent? Explain.

$(-6 + 3) \div \frac{1}{4}$

$(-3)4$

Yes. If we modify the 1st expression by simplifying the expression within the parentheses, then applying the multiplicative inverse to the denominator, we get the 2nd expression.

7. Six professional golfers played a round of golf at The Parboil Golf Club. Their scores relative to par were as follows: two were +1; three were -2; and one shot a -4. What was their average score relative to par?



-1.33

8. Is 1.5 a rational number? Explain.

Yes. $1.5 = \frac{3}{2}$

9. The temperature was pretty cold last week in Deluth. Based upon this table, what was the mean minimum temperature?

Number of Days	1	4	2
Minimum Temperature	-3°	-9°	2°

-5°