

Name _____

UNIT 1 REVIEW -- Accelerated

1) Tell the absolute value of:

a) $|-5|$

a) 5

b) $|56|$

b) 56

c) $|0|$

c) 0

d) $|-1|$

d) 1

2) Tell the opposite of:

a) 9

a) -9

b) -6

b) 6

c) -15

c) 15

d) 0

d) 0

3) Perform the indicated operation.

a) $-6 + 12$

a) 6

b) $18 + -4$

b) 14

c) $-23 + 15$

c) -8

d) $-12 + -17$

d) -29

e) $-14 + 26 + -18$

e) -6

f) $25 + -13 + -17 + 34$

f) 29

g) $-16 - (-8)$

g) -8

h) $-42 - 9$

h) -51

i) $3(-18)$

j) $\frac{-54}{3}$

k) $-24-36$

l) $46 - (-8)$

m) $\frac{-16}{4}$

n) $-5(-20)$

o) $(-3)(-2)(5)(-8)(1)$

p) $|-6+3|+(-5)$

q) $|-3|-|-2|$

r) $|-2(4)|+|3(-5)|$

i) -54

j) -18

k) -60

l) 54

m) -4

n) 100

o) -240

p) $3 + (-5) = -2$

q) $3 - 2 = 1$

r) $8 + 15 = 23$

4) Complete the statement using $<$, $>$ or $=$

a) -3 _____ $|-3|$

b) $|-16|$ _____ 16

c) -2 _____ -8

d) -16 _____ 13

e) -5 _____ -4

a) $<$

b) $=$

c) $>$

d) $<$

e) $<$

5) Write an addition sentence for each situation. Then find the sum:

a) You withdraw \$40 from your savings account. Then you withdraw \$23.95 more.

a) $-40 + (-23.95) = \boxed{-63.95}$

b) In Saturday's football game, the Jackson Terriers lost 3 yards on one play. They gained five yards on the next.

$$b) -3 + 5 = \boxed{2 \text{ yds}}$$

c) The temperature was 16°F . The wind chill made it seem 25° colder.

$$c) 16 + (-25) = \boxed{-9^{\circ}}$$

6) Show the set of natural numbers.

$$6) 1, 2, 3, \dots$$

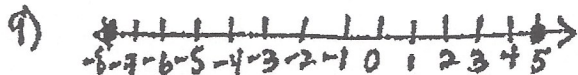
7) Show the set of whole numbers.

$$7) 0, 1, 2, 3, \dots$$

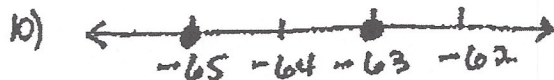
8) Show the set of integers.

$$8) \dots, -3, -2, -1, 0, 1, 2, 3, \dots$$

9) Plot the following integers on a number line: -8, and 5



10) Plot the following integers on a number line: -63, -65



11) Put the following integers in order from least to greatest:

-2, 5, -9, 4, 0, -18, -8

$$11) -18, -9, -8, \overset{-2}{0}, 4, 5$$

12) Place an addition or subtraction symbol in each space so that the expression on the left equals the expression on the right.

a) $3 \underline{\quad} -3 = 5 \underline{\quad} 1$

b) $-7 \underline{\quad} 3 = -2 \underline{\quad} -2$

c) $-15 \underline{\quad} -2 = 20 \underline{\quad} -37$

d) $-9 \underline{\quad} -3 \underline{\quad} -10 = 12 \underline{\quad} -8$

e) $-3 \underline{\quad} 8 \underline{\quad} -4 = 7 \underline{\quad} 1 \underline{\quad} 3$

a) $3 \underline{-} -3 = 5 \underline{+} 1$

b) $-7 \underline{+} 3 = -2 \underline{+} -2$

c) $-15 \underline{+} -2 = 20 \underline{+} -37$

d) $-9 \underline{-} -3 \underline{-} -10 = 12 \underline{+} -8$

e) $-3 \underline{+} 8 \underline{-} -4 = 7 \underline{-} 1 \underline{+} 3$

13) Write two different pairs of integers, x and y, that make the statement $x - y = -1$ true.

1) _____

2) _____

Sample answers:

1) 6, 7

2) 9, 10

14) Your sports drink bottle is $\frac{5}{6}$ full. After practice the bottle is $\frac{3}{8}$ full. Write the difference of the amounts after practice and before practice.

$$\frac{3}{8} - \frac{5}{6} = \frac{9}{24} - \frac{20}{24} = \boxed{\frac{11}{24}}$$

15) What can you tell about two integers when their quotient is positive?

What can you tell about two integers when their quotient is negative?

What can you tell about two integers when their quotient is zero?

16) The total height of the Statue of Liberty and its pedestal is 305 feet. This is 153 feet more than the height of the statue. What is the height of the statue?

17) Classify (list all the categories) to which each number belongs: natural (N), whole (W), integer (I), Rational (R), Irrational (Ir)

a) .989898....

b) -256

c) $\frac{4}{5}$

d) -2.5

e) 0

f) 2.6767767776....

g) 16

The two integers must have the same sign, both positive or both negative.

The two integers must have different signs, one + and one -.

The numerator (dividend) must be zero and the denominator (divisor) can be any quantity.

$$305 = \text{height} + 153$$

$$\text{height} = 152 \text{ ft.}$$

17) Classify (list all the categories) to which each number belongs: natural (N), whole (W), integer (I), Rational (R), Irrational (Ir)

a) .989898.... R

b) -256 I, R

c) $\frac{4}{5}$ R

d) -2.5 R

e) 0 W, R

f) 2.6767767776.... Ir

g) 16 N, W, I, R

18) Solve:

$$[45 \div (5 + 10) \cdot 2] - [(9 + 6) \div 3]$$

19) Solve:

$$-7(26 + 16) \div 10 - 8 \cdot 2^3 - [(12 \cdot 4) \div 16] \cdot 0$$

Simplify:

20) $(-4)^4$

21) -4^4

22) $(-1)^{101}$

23) 5^0

24) $-(-4)^4$

18) $[45 \div (15) \cdot 2] - [15 \div 3] =$

$$[3 \cdot 2] - [5] =$$

$$6 - 5 =$$

$$1$$

19) $-7(42) \div 10 - 8 \cdot 8 - [(48) \div 16] \cdot 0 =$

$$-7(42) \div 10 - 8 \cdot 8 - [3] \cdot 0 =$$

$$-294 \div 10 - 8 \cdot 8 - [3] \cdot 0 =$$

$$-29.4 - 8 \cdot 8 - [3] \cdot 0 =$$

$$-29.4 - 64 - 0 =$$

$$-93.4 - 0 =$$

$$-93.4$$

20) $(-4)(-4)(-4)(-4) = 256$

21) $-(4)(4)(4)(4) = -256$

22) -1 (because 101 is odd)

23) 1

24) $-(-4)(-4)(-4)(-4) =$

$$-(256) = -256$$

Solve:

25) $-4x^2$ if $x = 2$

26) $16x^3$ if $x = -\frac{1}{4}$

27) $\frac{6r^2}{7st}$ if $r = 4, s = -8, t = 3$

Solve:

28) $-\sqrt{169} + \sqrt{25}$

29) $\sqrt{225} - \sqrt{36}$

30) $|\sqrt{25}| + (-26)$

25) $-4(2)^2 =$

$-4(4) =$

-16

26) $16(-\frac{1}{4})^3 =$

$16(-\frac{1}{4})(-\frac{1}{4})(-\frac{1}{4}) =$

$16(-\frac{1}{64}) =$

$-\frac{16}{64} = -\frac{1}{4}$

27) $\frac{6(4)^2}{7(-8)(3)} =$

$\frac{6(16)}{-56(3)} =$

$-\frac{96}{168} = -\frac{4}{7}$

28) $-13 + 5 = -8$

29) $15 - 6 = 9$

30) $|\sqrt{25}| + (-26) =$

$5 + (-26) = -21$