

$(\text{Score}) \times 2 = \text{percent}$

Name Key

Test #1 47 pts possible + 3 free = 50 pts possible

Directions: Please show all your work since partial credit is given. Answers without the necessary work will receive no credit. And remember, have fun!

1. Find the place value of the 5 in the following numbers

+ | a) 35,410,231 one-millions place + | b) 744,283,541 hundreds place

2. Write the following numbers in expanded form.

+ | a) 109,407

+ | b) 2,005,609

100,000 + 9,000 + 400 + 7

2,000,000 + 5,000 + 600 + 9

3. Translate each statement and simplify.

+2 a) Subtract 17 from 98

81

Expression $98 - 17$

+2 c) Three times the sum of 13 and 5

54

Exp: $3 \cdot (13 + 5)$

$3 \cdot 18$

+2 b) The quotient of 69 and 3

23

Expression $\frac{69}{3} = 23$

+2 d) The difference of 9 times 5 and 4

41

Expression $9 \cdot 5 - 4$

$45 - 4$

41

+12

4. Simplify the following expressions.

+ | a) $4(3x+5)$
 $12x+20$

$4 \cdot (3x) + 4 \cdot 5$ Distributive Prop

$12x + 20$

+ | d) 6^4
 1296

$6 \cdot 6 \cdot 6 \cdot 6$

\checkmark
 $36 \cdot 36$

1296

+ | b) $15 - 2(7-1)$
 3

$15 - 2 \cdot (6)$

$15 - 12$

3

+ | e) $15 + 4 \cdot 18 \div 9 - 2^2$
 19

$15 + 4 \cdot 18 \div 9 - (2 \cdot 2)$

$15 + 4 \cdot 18 \div 9 - 4$

$15 + 72 \div 9 - 4$

$15 + 8 - 4$

$23 - 4$

19

+ | c) $40 - 3 \cdot 10 - 2^3 \div 4$
 8

$40 - 3 \cdot 10 - (2 \cdot 2 \cdot 2) \div 4$

$40 - 3 \cdot 10 - 8 \div 4$

$40 - 30 - 2$

$\swarrow \quad \searrow$
 $10 - 2$
 8

+ | f) $3(x-2)$
 $3x-6$

$3 \cdot x - 3 \cdot 2$ Distribute Prop

$3x - 6$

+8

8. Simplify each of the following expressions.

$$+1 \quad \text{a) } -|-9|$$

$$-(9)$$

$$\boxed{-9}$$

$$+1 \quad \text{b) } -14+7$$

$$7+(-14)$$

$$7-14$$

$$\boxed{-7}$$

$$+1 \quad \text{c) } -96+(-31)$$

$$-96-31$$

$$\boxed{-127}$$

$$+1 \quad \text{d) } -9+5+(-10)$$

$$-9+5-10$$

$$-4-10$$

$$-14$$

$$\boxed{-14}$$

- +2 9. Britney earned \$134 waiting tables on Monday, spent \$115 on shoes on Tuesday, and made \$50 babysitting on Friday. Write the situation using positive and negative numbers and addition. Then simplify.

$$134 + (-115) + 50 \quad \text{Situation}$$

$$134 - 115 + 50$$

$$69$$

$$\boxed{\$69}$$

10. Simplify completely.

+ | a) $-18 - (-35)$

17

$-18 + 35$

$35 + (-18)$

$35 - 18$

17

+ | b) $8 + (-4) + 7$

11

$8 - 4 + 7$

$4 + 7$

11

+ 2 c) $(9 - 7)(2 - 5)$

-6

$2 \cdot (-3)$

-6

+ | d) $-7(-4)$

28

$-7 \cdot (-4)$

$+7 \cdot 4$

28

+ | e) $4(-7x + 2)$

$-28x + 8$

$4 \cdot (-7x) + 4 \cdot (2)$

$-28x + 8$

+ | f) $\frac{-16}{2}$

-8

$(-16) \div 2$

$-(16 \div 2)$

-8

+7

11. Translate into an expression and simplify, if possible.

+2 a) Find the sum of -22 and -17 .

+2 b) Find the quotient of 45 and -5 .

Expression $-22 + (-17)$
 $-(22 + 17)$

Expression $\frac{45}{-5} = -(45 \div 5)$
 $= -9$

-39

-9

+1 12. The average high temperature for January in Minneapolis is 21°F . The average low temperature for that month is -22°F . What is the difference between the average high and low temperatures?

(Ave High) - (Ave Low)

$21 - (-22)$

$21 + 22$

43

43°F

13. Reduce the following fractions to lowest terms.

+1 a) $\frac{16}{28}$

$\frac{16 \div 4}{28 \div 4} = \frac{4}{7}$

$\frac{4}{7}$

+1 b) $\frac{150a}{45a} = \frac{15 \cdot 10 \cdot a}{15 \cdot 3 \cdot a}$

$\frac{10}{3}$

+7