

## Test Review 1

Simplify each expression.

1)  $6b - 7b$   
 $-b$

3)  $7v - 3 + 9 + 6v$   
 $13v + 6$

5)  $2 - 8v - 2v + 9$   
 $-10v + 11$

7)  $-7(k + 10) + 4$   
 $-7k - 70 + 4 = -7k - 66$

9)  $2 + (-7n - 7) \cdot -9$   
 $2 + 63n + 63 = 63n + 65$

11)  $-10(8x - 5) - 3$   
 $-80x + 50 - 3 = -80x + 47$

13)  $-2n - 10(n - 1)$   
 $-2n - 10n + 10 = -12n + 10$

15)  $4(x - 10)$   
 $4x - 40$

17)  $-4(2x - 8)$   
 $-8x + 32$

Evaluate each expression.

19)  $6 \times 6 - (4 + 6 + 1) - 5$   
 $36 - 11 - 5$   
 $25 - 5 = 20$

21)  $(2 + 4 \times 3) \times 2 - 1 - 5$   
 $(2 + 12) \cdot 2 - 1 - 5$   $27 - 5$   
 $(14) 2 - 1 - 5$   $22$   
 $28 - 1 - 5$

23)  $6 - (-5)^2 \times -1$   
 $6 - 25 \cdot (-1)$   
 $6 + 30 = 36$

Write each as an algebraic expression.

25) 5 less than u  
 $u - 5$

2)  $x - 10 + x + 6$   
 $2x - 4$

4)  $7 - 4x + x + 2$   
 $-3x + 9$

6)  $-10k - 7 - 4$   
 $-10k - 11$

8)  $5n - 4(n - 5)$   
 $5n - 4n + 20 = n + 20$

10)  $-5(-5n + 8) - 2n$   
 $25n - 40 - 2n = 23n - 40$

12)  $8 - 3(6 + 3p)$   
 $8 - 18 - 9p = -9p - 10$

14)  $-7(8 - 5n) + 5$   
 $-56 + 35n + 5 = 35n - 51$

16)  $7r(1 - 6r)$   
 $-42r^2 + 7r$

18)  $-(9 - 10x)$   
 $10x - 9$

20)  $\frac{(12 - 2) \times 2}{1 + 2 \times 2}$   
 $\frac{10 \cdot 2}{1 + 4} = \frac{20}{5} = 4$

22)  $3(4 + 2 \times 3) - \frac{10}{2}$   
 $3(2 \cdot 3) - 5$   $18 - 5$   
 $3(6) - 5$   $13$

24)  $5 - (5 \times -3 - 6)$   
 $5 - (-15 - 6)$   
 $5 - (-21) = 26$

26) 7 less than z  
 $z - 7$

27) the difference of  $c$  and 14

$$c - 14$$

29) the product of  $n$  and 9

$$9n$$

28) the quotient of 24 and  $v$

$$\frac{24}{v}$$

30) 9 more than  $x$

$$9 + x$$

### Algebraic Properties

A

Additive Identify

A)  $x + 0 = x$

M

Commutative property of addition

B) if  $a = b$  and  $b = c$  then  $a = c$

K

Distributive property

C)  $(ab)c = a(bc)$

D)  $a = a$

C

Associative property of multiplication

E)  $(ab)^n = a^n b^n$

F)  $(a)b = a(b) = ab$

G)  $(a + b) + c = a + (b + c)$

J

Multiplicative identity

H)  $ab = ba$

I) If  $a = b$  then  $a + x = b + x$

H

Commutative property of multiplication

J)  $1x = x$

K)  $a(b + c) = ab + ac$

G

Associative property of addition

L)  $(a)(b) = ab$

M)  $a + b = b + a$

N) If  $a = b$  then  $ax = bx$