QUIZ 1A (1.1-1.3)

Name:_____ Date: _____ Score: _____ 10 pts. possible

Evaluate. **TEACHER KEY:**

1. mn for $m = 3$ and $n = 7$

$(3)(7) = 21$

2. $\frac{a+b}{2a}$ for $a = 5$ and $b = 15$

$\frac{5+15}{2(5)} = \frac{20}{10} = 2$

3. $4x^2$ for $x = 3$

$4(3)^2 = 4 \cdot 9 = 36$

4. $(5n)^2$ for $n = 6$

$(5 \cdot 6)^2 = 30^2 = 900$

Simplify.

5. $18 \times 2 \div 9 - 3$

$36 \div 9 - 3$
$4 - 3 = 1$

6. $\frac{3pq}{6q}$

$\frac{{}^{1}\cancel{3}\,p\,\cancel{q}}{{}^{2}\cancel{6}\,\cancel{q}} = \frac{p}{2}$

Write an equivalent expression. **TEACHER KEY:**

7. $\frac{y}{10}$ Use $\frac{z}{z}$ for 1 $\frac{yz}{10z}$

Use the commutative property to write an equivalent expression.

8. $a + b$ $b + a$

Write using exponential notation.

9. $5 \cdot m \cdot m \cdot m \cdot m$ $5m^4$

Write with a single exponent.

10. $\frac{10^5}{10^3}$ $10^{5-3} = 10^2$

QUIZ 1B (1.4-1.7)

Name:_____ Date: _____ Score: _____ 10 pts. possible

Use the associative property to write an equivalent expression. **TEACHER KEY:**

1. $(5 + x) + y$ $5 + (x + y)$

Evaluate.

2. $(12 - w)^3$ for $w = 7$ $(12 - 7)^3 = 5^3 =$ 125

3. $\frac{x + y}{4}$ when $y = 2$ and $x = 14$ $\frac{14 + 2}{4} = \frac{16}{4} =$ 4

Use the distributive property to write an equivalent expression.

4. $5(6m + 7)$ $30m + 35$

Factor.

5. $9a + 27b + 81$ $9(a + 3b + 9)$

Simplify. (Collect like terms.)

6. $6z + 3k + 9z$

$3k + 15z$

7. $8(a + b) + 4(a + 2b)$

$8a + 8b + 4a + 8b$
$= 12a + 16b$

Write as an algebraic expression.

8. 4 less than d

$d - 4$

Tell what can be done to each side of the equation to get the variable alone on one side of the equal sign.

9. $g + 34 = 60$

Subtract 34 from each side.

$g + 34 - 34 = 60 - 34$
$g = 26$

10. $\frac{t}{8} = 12$

Multiply by 8.

$\frac{t}{8} \cdot 8 = 12 \cdot 8$
$t = 96$

TEST 1

Name:_____ Date: _____ Score: _____ 40 pts. possible

Evaluate. **TEACHER KEY:**

1. $p(6 + q)$ for $p = 3$ and $q = 5$

$3(6 + 5) = 3(11) =$ 33

2. $b^4 + 3$ for $b = 2$

$(2)^4 + 3 = 16 + 3 =$ 19

3. $(6 + a) \cdot (b - 4)$ for $a = 8$ and $b = 6$

$(6 + 8) \cdot (6 - 4) = 14 \cdot 2 =$ 28

4. $(3x)^3 + 4$ for $x = 2$

$(3 \cdot 2)^3 + 4 = 6^3 + 4 = 216 + 4 =$ 220

Simplify.

5. $15 \div 3 + 6 \cdot 8$

$5 + 48 =$ 53

6. $16 \div 8 + 8$

$2 + 8 =$ 10

7. $\dfrac{9pq}{72p}$

$\dfrac{{}^{1}\cancel{9}pq}{{}^{8}\cancel{72}p} = \dfrac{q}{8}$

Use the commutative property to write an equivalent expression.

8. $a + 6$

$= 6 + a$

Write an equivalent expression.

9. $\frac{2x}{y}$ Use $\frac{z}{z}$ for 1

$\frac{2xz}{yz}$

Write using exponential notation.

10. $4 \cdot y \cdot y \cdot y$

$4y^3$

Use the associative property to write an equivalent expression.

11. $(7 \cdot y) \cdot x$

$7(y \cdot x)$

Use the distributive property to write an equivalent expression.

12. $6(4y + 3)$

$24y + 18$

Factor.

13. $4 + 12b + 36a$

$4(1 + 3b + 9a)$

Collect like terms.

14. $15m^2 + 12m + 4m^2$

$19m^2 + 12m$

Write as an algebraic expression.

15. the sum of x and y — $x + y$

16. the product of 5 and w — $5w$

17. Suppose a was Robert's age 12 years ago. What is his age now? — $a + 12$

Each pair of equations is equivalent. What was done to the first equation to get the second one?

18. $2x - 8 = 20$
$2x - 13 = 15$ — Subtract 5 from each side.

19. $\frac{r}{5} = 10$
$2r = 100$ — Multiply both sides by 10.

Solve.

20. Find the ***distance*** (d) traveled by a train moving at the rate (r) of 50 mi/hr for the time (t) of 3 hr, using the formula $d = rt$.

$d = \left(\frac{50 \text{ mi}}{1 \text{ hr}}\right)\left(\frac{3 \text{ hr}}{1}\right)$
$d = 150$ mi