

Unit One: Back to the Basics

Name: _____

Key

Pre-Algebra: Practice Test

Hour: _____

1.1 I can identify the commutative, associative, and identity properties.

Name the property being illustrated below.

1. $w \cdot 1 = w$

Identity for Multiplication

2. $(a + b) + 7 = 7 + (a + b)$

Commutative for Addition

3. $8(xy) = (8x)y$

Associative for Multiplic.

4. $c + 0 = c$

Identity for Addition

5. $(a + 3) + b = a + (3 + b)$

Associative for Addition

6. $5n * 6 = 5(6)n$

Commutative for Multiplic.

Score: _____

6 pts.

%

1.2: I can write expressions using number, operations and variables.

1. The sum of a number and 9.

$$n + 9$$

2. The product of a number and 5 is the same as 20.

$$n * 5 = 20$$

or

$$5n = 20$$

3. 20 less than some number.

$$n - 20$$

4. The quotient of 30 and the difference some number and 7 is less than 40.

$$30 \div (n - 7) < 40$$

5. A number is at most 22

$$n \leq 22$$

or

$$22 \geq n$$

6. 6 times the quantity of some number and 3.

$$6(n + 3)$$

7. The difference of a number and 10.

$$n - 10$$

8. 16 is greater than or equal to the sum of a number and 34.

$$16 \geq n + 34$$

9. 8 more than the quotient of 20 and some number.

$$8 + (20 \div n)$$

10. The product of 3 and the quantity of some number minus 15.

$$3(n - 15)$$

Score: 10 pts. %

1.3: I can round a number to the correct place value and I can add and subtract multi-digit numbers with decimals

1. Round to the nearest hundredth: 8.437

8.44

2. Round to the nearest tens: 63.992

60

3. Round to the nearest tenth: 5.9876

6.0

4. Round to the nearest thousandth: 0.6774

0.677

5. Add: $43.57 + 104.6$

$$\begin{array}{r} 43.57 \\ + 104.60 \\ \hline 148.17 \end{array}$$

6. Add: $1392.16 + 16.16$

$$\begin{array}{r} 1392.16 \\ + 16.16 \\ \hline 1408.32 \end{array}$$

7. Add: $22.63 + 1.694$

$$\begin{array}{r} 22.630 \\ + 1.694 \\ \hline 24.324 \end{array}$$

8. Subtract: $17.6 - 9.3$

$$\begin{array}{r} 17.6 \\ - 9.3 \\ \hline 8.3 \end{array}$$

9. Subtract: $23.96 - 19.931$

$$\begin{array}{r} 23.960 \\ - 19.931 \\ \hline 4.029 \end{array}$$

10. Subtract: $44.44 - 16.1$

$$\begin{array}{r} 44.44 \\ - 16.10 \\ \hline 28.34 \end{array}$$

Score: 10 pts. %

1.4: I can compare and order decimals and I can multiply multi-digit decimals.

Compare the numbers given using $<$, $>$, or $=$.

1.

$$5.6 \underline{<} 5.65$$

2.

$$4.234 \underline{=} 4.2340$$

3. Multiply: 9.6×5

$$\begin{array}{r} 9.6 \\ * 5 \\ \hline 48.0 \end{array}$$

4. Multiply: 5.29×11.3

$$\begin{array}{r} 5.29 \\ * 11.3 \\ \hline 1587 \\ 5290 \\ 52900 \\ \hline 59.777 \end{array}$$

5. Multiply: 8.3×7.4

$$\begin{array}{r} 8.3 \\ * 7.4 \\ \hline 332 \\ 5810 \\ \hline 61.42 \end{array}$$

6. Multiply: 18.7×19

$$\begin{array}{r} 18.7 \\ * 19 \\ \hline 1683 \\ + 1870 \\ \hline 355.3 \end{array}$$

Score: 6 pts %

1.5: I can divide multi-digit decimals

Show your work.

1. Divide: $2.45 \div 3.5$

$$\begin{array}{r} 3.5 \overline{) 2.45} \\ \underline{- 245} \\ 0 \end{array}$$

2. Divide: $1.45 \div 0.08$

$$\begin{array}{r} 18.125 \\ .08 \overline{) 1.45000} \\ \underline{- 8} \\ 65 \\ \underline{- 64} \\ 100 \\ \underline{- 80} \\ 20 \\ \underline{- 16} \\ 40 \\ \underline{- 40} \\ 0 \end{array}$$

3. Divide: $6.7 \div 13.4$

$$\begin{array}{r} 13.4 \overline{) 6.70} \\ \underline{670} \\ 0 \end{array}$$

4. Divide: $11.5 \div 0.2$

$$\begin{array}{r} 57.5 \\ .2 \overline{) 11.50} \\ \underline{- 10} \\ 15 \\ \underline{- 14} \\ 10 \\ \underline{- 10} \\ 0 \end{array}$$

Score: 4 pts %

1.6: I can write repeated multiplication using an exponent, I can simplify expressions using the Product and Quotient Power Properties

Write repeated multiplication of same factor using an exponent.

1. $m * m * m * m * m * m * m * m * m * m =$

$$m^{10}$$

2. $5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 =$

$$5^7$$

Write the exponent as repeated multiplication.

3. n^3

$$n \cdot n \cdot n$$

4. 3^5

$$3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$$

Simplify.

5. $g^6 \cdot g^5 \cdot g$

$$g^{12}$$

6. $3k \cdot 2k^4 \cdot k \cdot k^9$

$$6k^{15}$$

7. $\frac{f^8}{f^5}$

$$f^3$$

8. $\frac{16n^5}{8n^5}$

$$2$$

$$n^0 = 1$$

Score: 8 pts. %

1.7: I can use Order of Operations to calculate numerical expressions

1. $3[5 + (3^3 - 7)]$

$$3[5 + (27 - 7)]$$

$$3[5 + 20]$$

$$3[25]$$

$$\boxed{75}$$

2. $\frac{13+11}{14-6-2^2}$

$$\frac{24}{14-6-4} = \frac{24}{4} = \boxed{6}$$

3. $26 - (4^2 - 8) \div 2$

$$26 - (16 - 8) \div 2$$

$$26 - (8) \div 2$$

$$26 - 4$$

$$\boxed{22}$$

4. $\frac{16 \div 4 - 24 \div 12}{4 - 2}$

$$4 - 2$$

$$\boxed{2}$$

5. $\frac{13 + 7^2 \div 7}{9 - 20 \div 4 + 16}$

$$\frac{13 + 49 \div 7}{9 - 5 + 16} = \frac{13 + 7}{20} = \frac{20}{20} =$$

$$\boxed{1}$$

6. $\frac{36}{2} + \frac{3 \cdot 21}{11 - 2}$

$$18 + \frac{63}{9}$$

$$18 + 7$$

$$\boxed{25}$$

7. $(13 - 9 + 2 - 1)^2 \div (3^2 - 4)$

$$(4 + 2 - 1)^2 \div (9 - 4)$$

$$(5)^2 \div 5$$

$$25 \div 5$$

$$\boxed{5}$$

8. $30 + 2 - 24 \div 4 + 9 - 3(4)$

$$30 + 2 - 6 + 9 - 12$$

$$\boxed{23}$$

Score: 8 pts %

