

**GRADE 10 ESSENTIAL  
UNIT X – PRIOR STUDIES  
WHOLE NUMBER OPERATIONS**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Manually (ie: by hand; pencil and paper) calculate all of the arithmetic operations below.

Use numbers. Show all work (steps of the algorithm, carries, renaming..)

Rounding and estimating first is a good way to see if you are likely doing it correctly and close.

Check your answer with a calculator and redo if necessary

1. Add (find the indicated *sum*):

$$\begin{array}{r} 312 \\ +436 \\ \hline 748 \end{array}$$

$$\begin{array}{r} 576 \\ +436 \\ \hline 1012 \end{array}$$

$$\begin{array}{r} 47.2 \\ +68.2 \\ \hline 115.4 \end{array}$$

$$\begin{array}{r} 1,837 \\ +2,188 \\ \hline 4,025 \end{array}$$

$$\begin{array}{r} 12,199 \\ +7,842 \\ \hline 20,041 \end{array}$$

e. Calculate the sum of 59 and 16 and 88.

2. Subtract: (find the '*difference*') (don't forget to check by adding up!)

$$\begin{array}{r} 467 \\ -236 \\ \hline 231 \end{array}$$

$$\begin{array}{r} 532 \\ -216 \\ \hline 316 \end{array}$$

$$\begin{array}{r} 7910 \\ 800 \\ -356 \\ \hline 444 \end{array}$$

d.  $388 - 245$

$$\begin{array}{r} 388 \\ - 245 \\ \hline 143 \end{array}$$

e.  $1,345 - 857$

$$\begin{array}{r} 1,345 \\ - 857 \\ \hline 488 \end{array}$$

f. Calculate the difference of 230 and 123.

$$\begin{array}{r} 230 \\ - 123 \\ \hline 107 \end{array}$$

[ Ever notice how cashiers make change? (Manually) ]

g. What is your change from a \$10.00 bill if you buy a \$3.47 scribbler?

$$\begin{array}{r} 10.00 \\ - 3.47 \\ \hline 6.53 \end{array}$$

$$\begin{array}{r} + 3^d \text{ makes } 3.50 \\ + 50^d \text{ makes } 4 \\ + 6 \text{ makes } 10 \\ \hline 6.53 \end{array}$$

3. Calculate the product as indicated.

a.  $52 \times 15$

$$\begin{array}{r} 52 \\ \times 15 \\ \hline 260 \\ 52 \text{ --} \\ \hline 780 \end{array}$$

b.  $68 \times 7$

$$\begin{array}{r} 68 \\ \times 7 \\ \hline 476 \checkmark \end{array}$$

c.  $438 \times 46$

$$\begin{array}{r} 438 \\ \times 46 \\ \hline 2628 \\ 1752 \text{ --} \\ \hline 20,148 \end{array}$$

d.  $\begin{array}{r} 467 \\ \times 36 \\ \hline \end{array}$

$$\begin{array}{r} 2802 \\ 1401 \text{ --} \\ \hline 16812 \checkmark \end{array}$$

e.  $\begin{array}{r} 99 \\ \times 52 \\ \hline \end{array}$

$$\begin{array}{r} 198 \\ 495 \text{ --} \\ \hline 5,148 \end{array}$$

$$\leftarrow \begin{array}{r} 5200 \\ - 52 \\ \hline 5148 \end{array}$$

f. Carla has 18 boxes of smarties, each box has 43 smarties in it. How many smarties are there altogether (ie: total)?

$$\begin{array}{r} 43 \\ \times 18 \\ \hline 344 \\ 43\phantom{0} \\ \hline 774 \end{array} \quad \checkmark$$

4. Find the quotient as indicated: (the result of a dividing is called the quotient) (Don't forget to check by multiplying)

a.  $54 \checkmark$

$$\begin{array}{r} 3 \overline{)162} \\ -150 \\ \hline 12 \\ -12 \\ \hline 0 \end{array}$$

b.  $33 R0$

$$\begin{array}{r} 18 \overline{)594} \\ -54 \\ \hline 54 \\ -54 \\ \hline 0 \end{array}$$

Check:  $\begin{array}{r} 18 \\ \times 33 \\ \hline 594 \end{array} \checkmark$

c.  $952 \div 17 =$

$$\begin{array}{r} 56 \\ 17 \overline{)952} \\ -85 \downarrow \\ \hline 102 \\ -102 \\ \hline 0 \end{array}$$

$56 R0$

d.  $7218 / 18$

$$\begin{array}{r} 401 R0 \\ 18 \overline{)7218} \\ -72 \downarrow \\ \hline 01 \\ -00 \downarrow \\ \hline 18 \\ -18 \\ \hline 0 \end{array}$$

5. **Problem Solving.** The sum of two numbers is 33, their difference is three. What are the two numbers?

18 and 15

Guess & check.

$$20 + 13 = 33$$

~~$$20 - 13 = 7$$~~

$$25 + 8 = 33$$

~~$$25 - 8 = 17$$~~

$$30 + 3 = 33$$

$$30 - 3 = 27$$

wrong way

$$18 + 15 = 33 \checkmark$$

$$18 - 15 = 3 \checkmark$$

Keep practicing in your workbook!