

Grade 11 Essential  
Unit X REVIEW– Manual Division

MrF

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

Show work!

**Division: Two Digits  
Divided by One Digit**

Dividing is  
un-multiplying!

• Example 1

Divide:

$78 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 = 0$   
Dividing is successive subtraction

$$\begin{array}{r} 6 \overline{)78} \end{array}$$

We begin by dividing the ten's in 78 by 6 and subtracting.

$$\begin{array}{r} 1 \\ 6 \overline{)78} \\ \underline{6} \\ 1 \end{array}$$

Must be less than the 'divisor': 6;  
or else go higher

To check:  $6 \cdot 1 + 1 = 7$

Next, we bring down the one's in 78

$$\begin{array}{r} 1 \\ 6 \overline{)78} \\ \underline{6} \\ 18 \end{array}$$

Divide using long division, and check your work.

1.  $5 \overline{)85}$

2.  $9 \overline{)72}$

3.  $6 \overline{)72}$

4.  $4 \overline{)84}$

5.  $5 \overline{)70}$

6.  $3 \overline{)87}$

"divisor" ) "dividend"  
"quotient"

7.  $4 \overline{)92}$

8.  $3 \overline{)42}$

9.  $56 \div 8$

Solve the following applications.

**13. Recreation.** Joaquin is putting pictures in an album. He can fit 8 pictures on each page. If he has 72 pictures, pages will he fill?

**14. Counting.** Kathy is separating a deck of 42 cards into 6 equal piles. How many piles will she have?

**(advanced) Decimal Dividing.** Keep going till you get to zero remainder. The 'dividend' (result) is a whole number and a decimal portion.

15.  $54 \div 4 =$

16.  $37 \div 4 =$

$$\begin{array}{r}
 13.5 \\
 4 \overline{)54.0} \\
 \underline{-4} \phantom{0} \\
 14 \phantom{0} \\
 \underline{-12} \phantom{0} \\
 20 \\
 \underline{-20} \\
 0 \text{ Done!}
 \end{array}$$

17.  $66 \div 5 =$

18.  $142.5 \div 5 =$

Advanced  
Needs  
separate  
lesson?

## Division: Three Digits Divided by Two Digits

### • Example 1

Divide

$$38 \overline{)293}$$

How many times does 38 go into 293?

$$\begin{array}{r} 7 \leftarrow \text{Your estimate} \\ 38 \overline{)293} \\ \underline{266} \\ 27 \end{array}$$

Multiply  $7 \times 38$ . The product, 266, is less than 293, and so we can subtract.

$$\begin{array}{r} ? \\ 6 \\ 38 \overline{)293} \\ \underline{-228} \\ 65 \end{array} \quad \begin{array}{r} 4 \\ 38 \\ \times 6 \\ \hline 228 \end{array}$$

must be lower than 38  
try 7

The remainder, 27, is less than the divisor, 38, and so the process is complete.

$$293 \div 38 = 7 \text{ r}27$$

Check:  $293 = 38 \times 7 + 27$  You should verify that this statement is true.

Whole number divide (show any remainder portion, not decimal amount)

1.  $58 \overline{)345}$

2.  $39 \overline{)821}$

3.  $63 \overline{)429}$

4.  $49 \overline{)379}$

5. Mandy is having a birthday party for her daughter. There are 8 children total and 26 cupcakes to share (equally).

- A) How many **whole** cupcakes does each child get?
- B) How many cup cakes are left over for Mandy?
- C) If a child can get a decimal fraction portion of a cupcake, how much cupcake would each child get?

### ANSWERS

#### Part 1

- 1) 17    2) 8    3) 12    4) 21    5) 14    6) 29    7) 23  
 8) 14    9) 7    13) 9    14) 7  
 15) 13.5    16) 9.25    17) 13.2    18) 28.5

#### Part 2

- 1) 5 remainder 55    2) 21 r2    3) 6 r51    4) 7 r36

*Notice how the remainder must be less than the divisor.*

*Don't forget to check by multiplying and then adding the remainder*

5) A) each child gets three whole cupcakes, B) there are two left over (remaining) for Mandy to eat! C) Each child would get 8.25 cupcakes if they were allowed decimal fraction portions. (also known as  $8 \frac{1}{4}$  if using proper fractions)