

MATH HELP

GRADE 5

NEW EDITION

CAPS



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CHAPTER 1: COUNT, ARRANGE AND COMPARE WHOLE NUMBERS

READ NUMBERS

Example

131 628

One hundred and thirty-one thousand six hundred and twenty-eight

WRITE NUMBERS

Group in groups of 3:

thousand			unit		
HT	TT	T	H	T	U

Example

Write 552 698 in words:

Five hundred and fifty-two thousand, six hundred and ninety-eight

Write 560 001 in words:

Five hundred and fifty thousand and one

CHAPTER 2: NUMBER SENTENCES

Math also has opposites

Plus, and minus are opposites. It

means:

$$23 + 12 = 35 \text{ so } 35 - 12 = 23 \text{ and } 35 - 23 = 12$$

A plus sum can be controlled by a minus sum.

Minus, and plus are opposites. It means:

$$33 - 22 = 11 \text{ so } 11 + 22 = 33$$

A minus sum can be controlled by a plus sum.

Multiply and divide are opposites. It

means:

$$5 \times 9 = 45 \text{ so } 45 \div 9 = 5 \text{ and } 45 \div 5 = 9$$

A multiplication sum can be controlled by a divide sum.

Divide and multiply are opposites. It means:

$$72 \div 6 = 12 \text{ so } 12 \times 6 = 72$$

A divide sum can be controlled by a multiplication sum.

CHAPTER 3: ADDITION AND SUBTRACTION

ADDITION (+)

Without carry-over

1. $\begin{array}{r} \text{T} \quad \text{U} \\ 4 \quad 2 \\ + 1 \quad 5 \\ \hline 5 \quad 7 \end{array}$ First add all the **units** below each other, and then add all the **tens** below each other. ALWAYS work from behind!

2. $\begin{array}{r} \text{T} \quad \text{U} \\ 2 \quad 4 \\ + 5 \quad 1 \\ \hline 7 \quad 5 \end{array}$

3. $\begin{array}{r} \text{H} \quad \text{T} \quad \text{U} \\ 3 \quad 2 \quad 1 \\ + 1 \quad 2 \quad 3 \\ \hline 4 \quad 4 \quad 4 \end{array}$ First add all the **units** below each other, then add all the **tens**, and then add all the **hundreds** below each other. ALWAYS work from behind!

4. $\begin{array}{r} \text{H} \quad \text{T} \quad \text{U} \\ 4 \quad 8 \quad 2 \\ + 3 \quad 1 \quad 5 \\ \hline 7 \quad 9 \quad 7 \end{array}$

5. $\begin{array}{r} \text{T} \quad \text{H} \quad \text{T} \quad \text{U} \\ 1 \quad 8 \quad 5 \quad 6 \\ + 8 \quad 1 \quad 1 \quad 2 \\ \hline 9 \quad 9 \quad 6 \quad 8 \end{array}$

6. $\begin{array}{r} \text{T} \quad \text{H} \quad \text{T} \quad \text{U} \\ 7 \quad 8 \quad 9 \quad 0 \\ + 2 \quad 1 \quad 0 \quad 8 \\ \hline 9 \quad 9 \quad 9 \quad 8 \end{array}$

7. $\begin{array}{r} \text{TT} \quad \text{T} \quad \text{H} \quad \text{T} \quad \text{U} \\ 1 \quad 8 \quad 5 \quad 6 \quad 5 \\ + 5 \quad 1 \quad 4 \quad 3 \quad 2 \\ \hline 6 \quad 9 \quad 9 \quad 9 \quad 7 \end{array}$

8. $\begin{array}{r} \text{TT} \quad \text{T} \quad \text{H} \quad \text{T} \quad \text{U} \\ 8 \quad 9 \quad 7 \quad 5 \quad 6 \\ + 1 \quad 0 \quad 1 \quad 0 \quad 1 \\ \hline 9 \quad 9 \quad 8 \quad 5 \quad 7 \end{array}$

SUBTRACTION (-)

Without borrowing

<p>1. T U First minus all the units below 4 2 each other, and then all the - 1 1 tens below each other. ALWAYS <hr/> 3 1 work from behind!</p>	<p>2. T U 8 9 - 1 5 <hr/> 7 4</p>
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<p>3. H T U First minus all the units 3 2 1 below each other, and - 1 2 1 then all the tens below <hr/> 2 0 0 each other, and then all the hundreds below each other. ALWAYS work from behind!</p>	<p>4. H T U 4 8 5 - 3 1 2 <hr/> 1 7 3</p>
---	--

<p>5. T H T U 8 8 5 6 - 1 1 1 2 <hr/> 7 7 4 4</p>	<p>6. T H T U 7 8 9 8 - 2 1 0 0 <hr/> 5 7 9 8</p>
--	--

<p>7. TT T H T U 5 8 5 6 5 - 1 1 4 3 2 <hr/> 4 7 1 3 3</p>	<p>8. TT T H T U 8 9 7 5 6 - 1 0 1 0 1 <hr/> 7 9 6 5 5</p>
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CHAPTER 5: MULTIPLICATION AND DIVISION

MULTIPLICATION (X)

Multiplication tables are very important!

Without carry-over

$$\begin{array}{r}
 1. \quad \text{T} \quad \text{U} \\
 \quad \quad 3 \quad 2 \\
 \times \quad \quad 2 \\
 \hline
 \quad \quad 6 \quad 4
 \end{array}$$

$$2 \times 2 = 4$$

$$3 \times 2 = 6$$

$$\begin{array}{r}
 2. \quad \text{T} \quad \text{U} \\
 \quad \quad 2 \quad 3 \\
 \times \quad \quad 3 \\
 \hline
 \quad \quad 6 \quad 9
 \end{array}$$

$$3 \times 3 = 9$$

$$2 \times 3 = 6$$

$$\begin{array}{r}
 3. \quad \text{H} \quad \text{T} \quad \text{U} \\
 \quad \quad \quad 3 \quad 2 \\
 \times \quad \quad \quad 1 \quad 2 \\
 \hline
 \quad \quad \quad 6 \quad 4 \\
 + \quad 3 \quad 2 \quad 0 \\
 \hline
 \quad \quad 3 \quad 8 \quad 4
 \end{array}$$

$$2 \times 2 = 4$$

$$3 \times 2 = 6$$

Cross out the 2. Put a 0. (Lay a golden egg)

Now multiply with the 1.

$$2 \times 1 = 2$$

$$3 \times 1 = 3$$

Add

With carry-over

$$\begin{array}{r}
 1. \quad \text{H} \quad \text{T} \quad \text{U} \\
 \quad \quad 8^{+1} \quad 6 \\
 \times \quad \quad \quad 2 \\
 \hline
 1 \quad 7 \quad 2
 \end{array}$$

$$6 \times 2 = 12$$

$$8 \times 2 = 16$$

$$16 + 1 = 17$$

$$\begin{array}{r}
 2. \quad \text{H} \quad \text{T} \quad \text{U} \\
 \quad \quad 4^{+1} \quad 5 \\
 \times \quad \quad \quad 3 \\
 \hline
 1 \quad 3 \quad 5
 \end{array}$$

$$5 \times 3 = 15$$

$$4 \times 3 = 12$$

$$12 + 1 = 13$$

$$\begin{array}{r}
 3. \quad \text{H} \quad \text{T} \quad \text{U} \\
 \quad \quad 4^{+1} \quad 5 \\
 \times \quad \quad 1 \quad 2 \\
 \hline
 \quad \quad 9 \quad 0 \\
 + \quad 4^1 \quad 5 \quad 0 \\
 \hline
 5 \quad 4 \quad 0
 \end{array}$$

$$5 \times 2 = 10$$

$$4 \times 2 = 8$$

$$8 + 1 = 9$$

Cross out the 2. Put a 0. (Lay a golden egg)

Now multiply with the 1.

$$5 \times 1 = 5$$

$$4 \times 1 = 4$$

Add

$$\begin{array}{r}
 4. \quad \text{T} \quad \text{H} \quad \text{T} \quad \text{U} \\
 \quad \quad \quad 5^{+1} \quad 4 \\
 \times \quad \quad \quad 2 \quad 3 \\
 \hline
 \quad \quad 1^1 \quad 6 \quad 2 \\
 + \quad 1 \quad 0 \quad 8 \quad 0 \\
 \hline
 1 \quad 2 \quad 4 \quad 2
 \end{array}$$

$$4 \times 3 = 12$$

$$5 \times 3 = 15$$

$$15 + 1 = 16$$

Cross out the 3. Put a 0. (Lay a golden egg)

Now multiply with the 2.

$$4 \times 2 = 8$$

$$5 \times 2 = 10$$

Add

DIVISION (\div)short division

$$1. \begin{array}{r} 4 \ 2 \\ 2 \overline{) 8 \ 4} \end{array}$$

$$8 \div 2 = 4$$

$$4 \div 2 = 2$$

$$2. \begin{array}{r} 3 \ 2 \\ 3 \overline{) 9 \ 6} \end{array}$$

$$9 \div 3 = 3$$

$$6 \div 3 = 2$$

$$3. \begin{array}{r} 4 \ 2 \ 3 \\ 2 \overline{) 8 \ 4 \ 6} \end{array}$$

$$8 \div 2 = 4$$

$$4 \div 2 = 2$$

$$6 \div 2 = 3$$

$$4. \begin{array}{r} 1 \ 2 \ 3 \\ 3 \overline{) 3 \ 6 \ 9} \end{array}$$

$$3 \div 3 = 1$$

$$6 \div 3 = 2$$

$$9 \div 3 = 3$$

$$5. \begin{array}{r} 1 \ 3 \ 8 \\ 3 \overline{) 4 \ 1 \ 2 \ 4} \end{array}$$

$$4 \div 3 = 1 \text{ r } 1$$

$$11 \div 3 = 3 \text{ r } 2$$

$$24 \div 3 = 8$$

$$6. \begin{array}{r} 1 \ 4 \ 2 \ \text{r } 1 \\ 4 \overline{) 5 \ 1 \ 6 \ 9} \end{array}$$

$$5 \div 4 = 1 \text{ r } 1$$

$$16 \div 4 = 4$$

$$9 \div 4 = 2 \text{ r } 1$$

Long division $\div \times - \downarrow$

$$\begin{array}{r}
 1. \quad 4 \quad 2 \\
 2 \overline{) 8 \quad 4} \\
 - 8 \quad \downarrow \\
 \hline
 . \quad 4 \\
 - \quad 4 \\
 \hline
 .
 \end{array}$$

$$\begin{array}{l}
 8 \div 2 = 4 \\
 4 \times 2 = 8 \\
 8 - 8 = . \quad \downarrow 4 \\
 4 \div 2 = 2 \\
 2 \times 2 = 4 \\
 4 - 4 = .
 \end{array}$$

$$\begin{array}{r}
 2. \quad 3 \quad 2 \\
 3 \overline{) 9 \quad 6} \\
 - 9 \quad \downarrow \\
 \hline
 . \quad 6 \\
 - \quad 6 \\
 \hline
 .
 \end{array}$$

$$\begin{array}{l}
 9 \div 3 = 3 \\
 3 \times 3 = 9 \\
 9 - 9 = . \quad \downarrow 6 \\
 6 \div 3 = 2 \\
 2 \times 3 = 6 \\
 6 - 6 = .
 \end{array}$$

$$\begin{array}{r}
 3. \quad 4 \quad 2 \quad 3 \\
 2 \overline{) 8 \quad 4 \quad 6} \\
 - 8 \quad \downarrow \\
 \hline
 . \quad 4 \\
 - \quad 4 \quad \downarrow \\
 \hline
 . \quad 6 \\
 - \quad 6 \\
 \hline
 .
 \end{array}$$

$$\begin{array}{l}
 8 \div 2 = 4 \\
 4 \times 2 = 8 \\
 8 - 8 = . \quad \downarrow 4 \\
 4 \div 2 = 2 \\
 2 \times 2 = 4 \\
 4 - 4 = . \quad \downarrow 6 \\
 6 \div 2 = 3 \\
 3 \times 2 = 6 \\
 6 - 6 = .
 \end{array}$$

MULTIPLES AND FACTORS

Multiples: count in.

Factors: what can be divided into

Example

Write the first five multiples of 30

$$V_{30} = \{30; 60; 90; 120; 150\}$$

Write the first five multiples of 15

$$V_{15} = \{15; 30; 45; 60; 75\}$$

Write the first five multiples of 7

$$V_7 = \{7; 14; 21; 28; 35\}$$

Write the first five multiples of 9

$$V_9 = \{9; 18; 27; 36; 45\}$$

Write the first five multiples of 12

$$V_{12} = \{12; 24; 36; 48; 60\}$$

Example

Write the factors of 30

$$F_{30} = \{1; 2; 3; 5; 6; 10; 15; 30\}$$

Write the factors of 24

$$F_{24} = \{1; 2; 3; 4; 6; 8; 12; 24\}$$





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