MATH HELP

GRADE 6

NEW EDITION

CAPS

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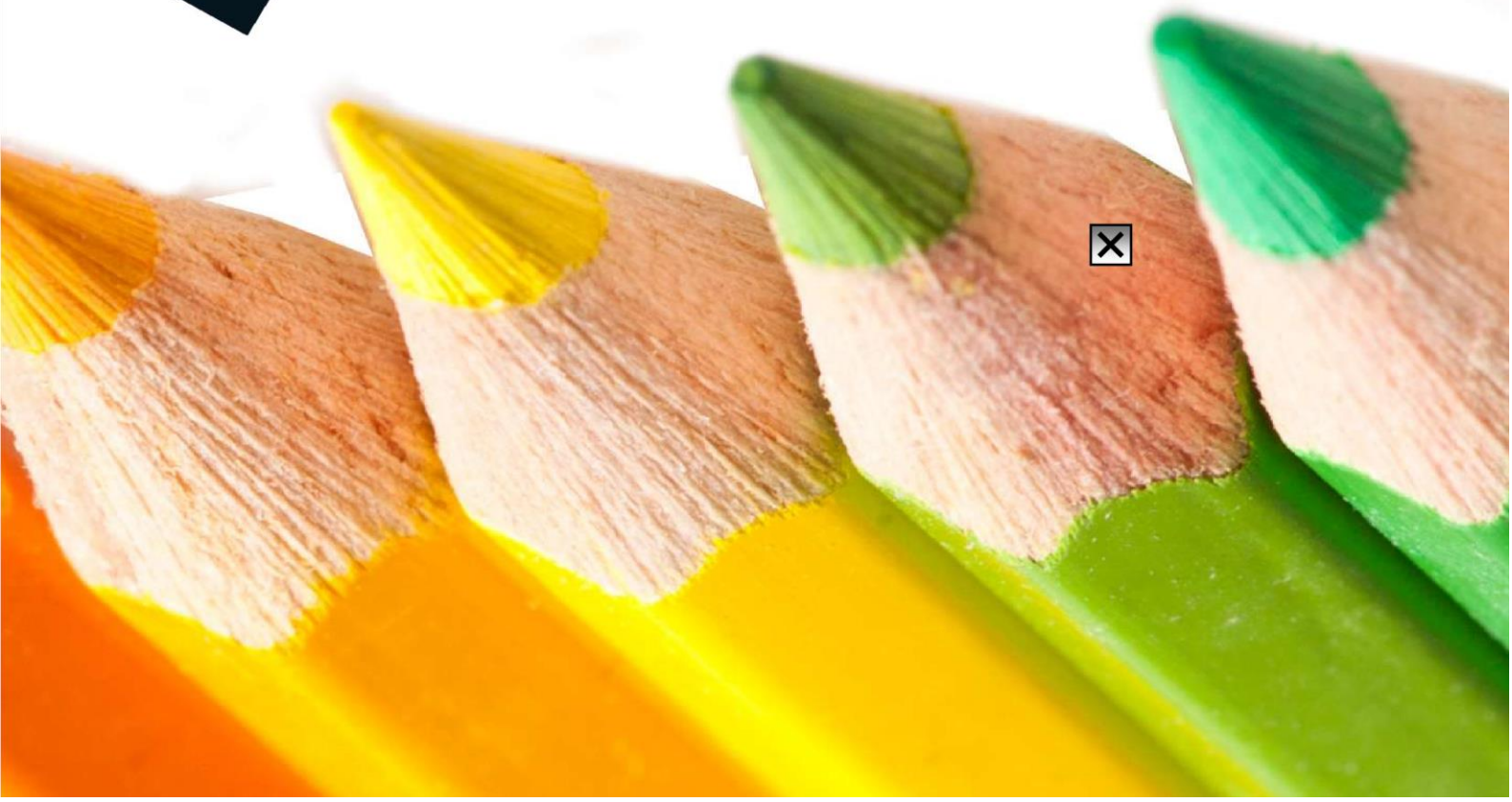

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EXAMPLE

CHAPTER 1: COUNT, ARRANGE, AND

COMPARE WHOLE NUMBERS

READ NUMBERS

Example

136 131 628

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

WRITE NUMBERS

Group in groups of 3:

Million			Thousand			Units , decimals					
HM	TM	M	HT	TT	T	H	T	U	t	h	t

Example Write

246 552 698 in words:

Two hundred and forty-six million, five hundred and fifty-two thousand, six hundred and ninety-eight

Example Write

56 000 000, 708 in words:

Fifty-six million, comma seven zero eight

EXAMPLE

CHAPTER 3: ADDITION AND SUBTRACTION

ADDITION (+)

EXAMPLE

Without carry-over

1. T U First add all the units below each other, and then all the tens below each other. ALWAYS work from behind.

```
  1 5
+ 4 2
-----
  5 7
```

2. T U

```
  4 2
+ 3 3
-----
  7 5
```

3. TT T H T U

```
    1 8 5 6 5
+ 5 1 4     3 2
-------------
    6 9 9 9 7
```

4. TT T H T U

```
        8
  9 7 5 6
+ 1 0 1 0 1
-----------
    9 8 5 7
```

5. HT TT T H T U

```
  8 8 7 8 9 6
  9 9 9 9 8
-------------
```

6. HT TT T H T U

```
  6 8 7 4 5 9
+ 1 1 2 1 0 2
-------------
    9 9 7 9 6 9
```

7. M HT TT T H T U

```
    1 9     5 6 8 7 5
+   8 0   1 1 1 2 2
-------------------
  9 9
```

8. M HT TT T H T U

```
    1 5       8 6 5 8 9
+ 6 3 1 3 4 1 0
---------------
    6 7 9 9 7 7 8 9 9 9 9
```

SUBTRACTION (-)

Without borrowing

1. T U First minus all the units below each other, and then all the tens below each other. ALWAYS work from behind!

```
  4 2
-
  3 1
```

2. T U

```
  8 9
- 1 5
-----
  7 4
```

3. TT T H T U

```
      3  2
   5 8 5 6 5
-  1   1 4
   4 7 1 3 3
```

4. TT T H T U

```
   8  9 7 5 6
-  1  0 1 0 1
   7  9 6 5 5
```

5. HT TT T H T U

```
   8 8 7 8 9 6
-    7   7 5 7 9 4
```

6. HT TT T H T U

```
     6 8 7 5 5 9
-  1 1 2 1 0 2
```

```
     3
1  0  4  1  0
-
   7  7 1 4 9
```

7. M HT TT T H T U

```
8 9
   5 6 8 7 5
-5 0 1 1 1 2 2
```

8. M HT TT T H T U

```
     8 6 5 8 9
-1 3 1 3 4 1 0
```

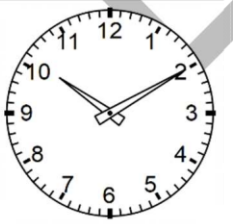
```
3 9 4 5 7 5 3
-
5 2 7 3 1 7 9
```

EXAMPLE

CHAPTER 5: TIME

ANALOGUE AND DIGITAL TIME

The long hand shows the minutes, and the shorthand shows the hours. Count in 5's for minutes.

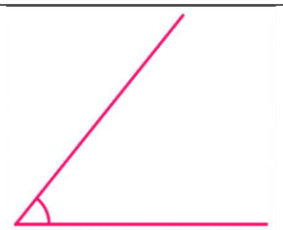
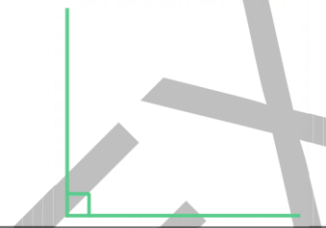
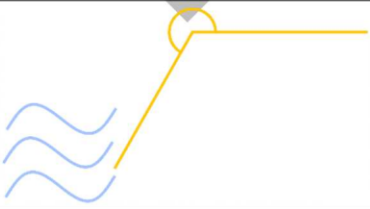
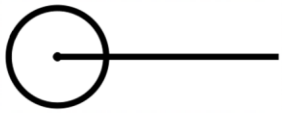
Watch	Analogue time	Digital time
	The long hand is on the 1 (5 minutes past). The shorthand (hours) is on the 10. It's now 5 past 10.	The long hand is on the 1 (5 minutes past). The shorthand (hours) is on the 10. am: 10:05. pm: 22:05
	The long hand is on the 2 (10 minutes past). The shorthand (hours) is on the 10. It's 10 past 10.	The long hand is on the 2 (10 minutes past). The shorthand (hours) is on the 10. am: 10:10

CHAPTER 6: 2D SHAPES

A 2D shape is a shape that has a length and width. Shapes that we can draw on paper are 2D shapes.

EXAMPLE

CLASSIFY ANGLES

Sketch	Name	Remember
	acute angle	it has an *acute* angle is sharp and can sting!
	obtuse angle	this angle is *obtuse* and cannot sting.
	right angle	it's a *right* angle, just like in your home.
	extended angle	like open *extended* arms.
	indented angle	jump into the *indented* pool!
	revolution	*all the way round.*

EXAMPLE

CHAPTER 9: MULTIPLICATION AND DIVISION

MULTIPLICATION (X)

Multiplication tables are very important!

Without carry-over

1.	H	T	U
		3	2
x		1	2
		6	4
+	3	2	0
	3	8	4

2 x 2 = 4
3 x 2 = 6
Cross out the 2.
Put a 0. (Lay a golden egg)
Multiply with 1.
2 x 1 = 2
3 x 1 = 3
Add

2.	H	T	U
		2	3
x		2	3
		6	9
+	4^{1}	6	0
	5	2	9

3 x 3 = 9
2 x 3 = 6
Cross out the 3.
Put a 0. (Lay a golden egg)
Multiply with 2.
3 x 2 = 6
2 x 2 = 4
Add

Long division

÷ x - ?

EXAMPLE

1. 1 1 3 8 r 4

5 | 5 6 9 4

- 5 ↓
1 9
- 1 5 ↓
4 4
- 4 0
4

5 ÷ 5 = 1
1 x 5 = 5
5 − 5 = . ↓6
6 ÷ 5 = 1
1 x 5 = 5
6 − 5 = 1 ↓9
19 ÷ 5 = 3
3 x 5 = 15
19 − 15 = 4 ↓4
44 ÷ 5 = 8
8 x 5 = 40
44 − 40 = 4

-
5
?

2. . 3 9 2 r 4

6 | ~~2~~[1] [1]3 5 6

- 1 8 ↓
. 5 5
- 5 4 ↓
1 6
- 1 2
4

5 ÷ 6 = .
23 ÷ 6 = 3
3 x 6 = 18
23 − 18 = 5 ↓5
55 ÷ 6 = 9
9 x 6 = 54
55 − 54 = 1 ↓6
16 ÷ 6 = 2
2 x 6 = 12
16 − 12 = 4

. 6

EXAMPLE

MULTIPLES AND FACTORS

Multiples: count in.

Factors: what can be divided into

Example

Write the first five multiples of 30

M_{30} = {30; 60; 90; 120; 150}

Write the first five multiples of 15

M_{15} = {15; 30; 45; 60; 75}

Write the first five multiples of 7

M_{7} = {7; 14; 21; 28; 35}

Write the first five multiples of 9

M_{9} = {9; 18; 27; 36; 45}

Write the first five multiples of 12

M_{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} Write

the factors of 32

F_{32} = {1; 2; 4; 8; 16; 32}

Write the factors of 45

EXAMPLE

F_{45} = {1; 3; 5; 9; 15; 45}

Write the factors of 60

F_{60} = {1; 2; 3; 4; 5; 6; 10; 12; 15; 20; 30; 60}

~~WORD PROBLEMS WITH MULTIPLICATION~~

Look out for words like times, multiply, each, if 1 box = R10 then 5 boxes…

Example

Tessa reads 45 min per day. She reads 30 days per month. She reads for 3 months. How long does she read in total in 3 months? 45 min x 30 x 3 = 4 050 min

$4^{1}5$ x

3 0

~~$1_1 3_1 5\ 0$~~

x 3

4 0 5 0

EXAMPLE

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