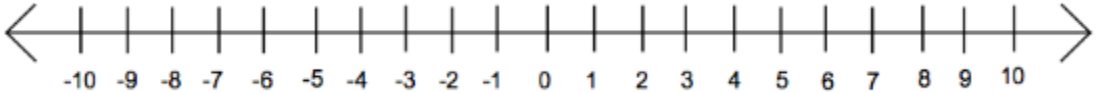
B7/8 LEARN SHEET

NEGATIVE NUMBERS: CONTEXT



Temperatures are colder as we move down the scale.

Temperatures are hotter as we move up the scale.

Example: $-6°C$ is colder than $-3°C$

DECIMAL ADDITION

$3.21 + 4.5$

Line up the decimal points

$$\begin{array}{r} 3.21 \\ +\ 4.5 \\ \hline 7.71 \end{array}$$

Add as usual!

MULTIPLICATION METHODS

$613 \times 5 =$

We partition 613 into 600 and 10 and 3 and put it in a table.

x	600	10	3
5	3000	50	15

Add up 3000, 50 and 15 to make 3065.

$613 \times 5 = 3065$

$$\begin{array}{r} 237 \\ \times\ \ \ 4 \\ \hline 948 \\ {\scriptstyle 1\ \ 2} \end{array}$$

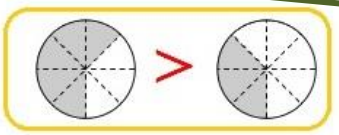
Multiply each digit by the number on the second row.

Carry extra digits into the next column.

FRACTIONS

What we do the top, we do to the bottom.

$\frac{1}{4} \xrightarrow{\times 6} \frac{6}{24}$



Make sure the denominators are the same.

$\frac{5}{8} > \frac{3}{8}$

Compare umerators to order.

For example:

$\frac{3}{4} + \frac{1}{8}$

We need to change $\frac{3}{4}$ into an equivalent fraction with a denominator of 8.

$\frac{3}{4} \overset{\times 2}{=} \frac{6}{8}$

Now we have:

$\frac{6}{8} + \frac{1}{8} = \frac{7}{8}$

$\frac{3}{5}$ *of* 25

Divide by the denominator

$25 \div 5 = 5$

Multiply by the numerator

$5 \times 3 = 15$

COLUMN CALCULATIONS

$$\begin{array}{r} 38 \\ +\ 93 \\ \hline 131 \\ {\scriptstyle 1} \end{array}$$

$8 + 3 = 11$

Carry extra digits into the next column.

$$\begin{array}{r} {\scriptstyle 6}\not{7}{\scriptstyle 1}2 \\ -\ \ 56 \\ \hline \ \ 16 \end{array}$$

Borrow from next column if number on the top is too

ROUNDING

Find the place value and circle it.

Move to the right and underline it.

0-4 the circle stays the same,

but 5-9, adding 1 is the game!

Digits to the right, change to 0.

All the other numbers, they stay the same.

589

Nearest 10
590

SHORT DIVISION

$$3\overline{)\,5\ {}^{2}3\ {}^{2}4} \quad 1\ 7\ 8$$

a) $5 \div 3 = 1$ with a remainder of 2.

b) Write the 2 beside the 3. You know have 23.

c) $23 \div 3 = 7$ with a remainder of 2.

d) Write the remainder by the 4. You know have 24.

e) $24 \div 3 = 8$ with no remainder.

f) The answer is 178.

ORDERING NUMBERS

Step 1: Line up the ones place.
Compare the digits in the greatest place.

2,199,000
2,200,000
2,130,000

Step 2: Compare the digits in the next place.

2,199,000
2,200,000
2,130,000

Step 3: Compare the digits in the next place.

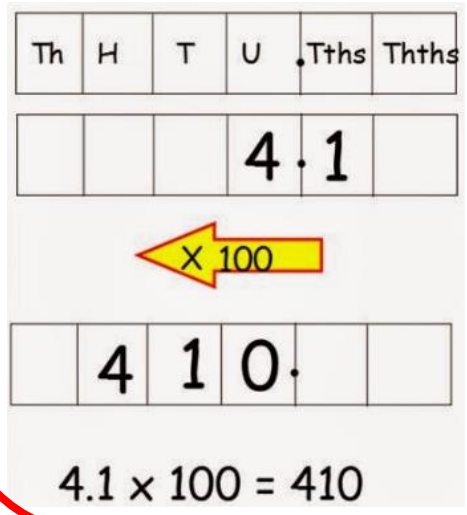
2,199,000
2,200,000
2,130,000

Step 4: Write the numbers in order.

2,200,000
2,199,000
2,130,000

Multiplying

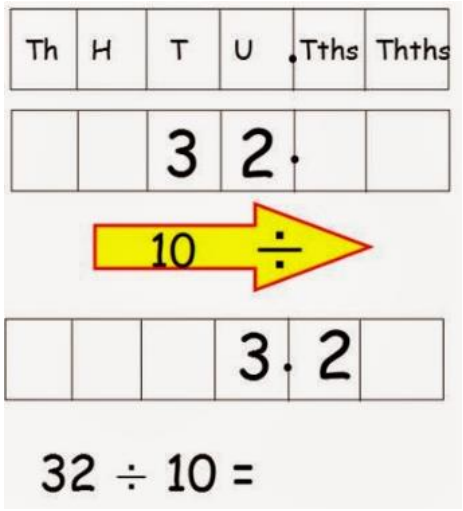
X 10 digits move LEFT **1** space
X 100 digits move LEFT **2** spaces
X 1000 digits move LEFT **3** spaces



4.1 x 100 = 410

Dividing

÷ 10 digits move RIGHT **1** space
÷ 100 digits move RIGHT **2** spaces
÷ 1000 digits move RIGHT **3** spaces



32 ÷ 10 =

PRIME NUMBERS

A prime is a number whose only factors are 1 and the number itself.

0 and 1 are not prime, and 2 is the only even prime number.
All numbers that are not prime are called composite.

not prime	1x2	1x3	2x2 1x4	1x5	2x3 1x6	1x7	2x4 1x8	3x3 1x9	2x5 1x10
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100