

Teaching Fractions and Other Number Ideas

Grade 4, 5 and 6

SEARTEC 

Proud distributor of: **SHARP**

What's on the Agenda?

- Fractions, Fractions and More Fractions
 - Mixed Number and Improper Fractions
 - Fractions of Whole Numbers
 - Equivalent Fractions and Decimals
 - The Equivalence of Division and Fractions
- Percentages
- Multiples and Factors
- Prime Factors
- Properties of Whole Numbers
- The Commutative, Associative and Distributive Properties

Fractions are the Same as Dividing

- This is very important for later concepts like algebra (solving for x), graphs and even trigonometry.
- We can write a fraction in two ways:

• We can say 1 \div 4 $=$ \downarrow ENTER

• Or 1 $\frac{a}{b}$ 4 $=$ \downarrow ENTER

• They are the same 😊



Mixed Numbers and Improper Fractions

- Let's add a mixed number and improper fraction together:

- E.g. $\frac{5}{2} + 3\frac{3}{4}$

- Press **ON/C** 5 **a/b** 2
- ▶** **+** 3 **2ndF** **a/b**
- 3 **▼** 4 **=**
[ENTER]



Equivalent Fractions and Decimals

- From your previous answer, there is a button on the screen that says **DATA CD**



- If you press it once, it will give you the improper fraction
- If you press it again it will give you the decimal. (6.25)



Fractions of Whole numbers

- Of means times 😊

- E.g. $\frac{5}{7}$ of 21

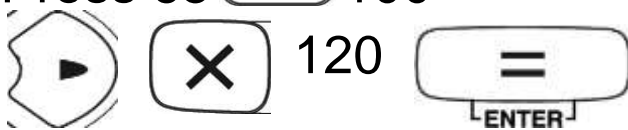
- Type in 5 a/b 7 ▶

- × 21

- =
ENTER



Percentages

- E.g. 65% of 120
- There are two methods:
 - The fraction-way
 - Press 65 $\frac{a}{b}$ 100
 -  120 $\frac{a}{b}$ 100 =
 - And the percentage button way
 - Type in 120
 - \times 65
 - $\frac{2ndF}{\%}$ 1



Multiples -Table Mode

- Press **MODE** 3
- Type in the number you would like multiples of – e.g. 17.
- Then press **RCL** **RCL**
- And **=** 3 times to get back to the table.
- Scroll down your table to see all the multiples!



Factors

- Press **ON/C** twice
- Type in the number you would like to find all the factor pairs of – e.g. 42
- Press **a/b**
- **RCL** **RCL**
- **=**
ENTER



Factor Pairs Cntd.



- Leave your start at 0 so press



- Make your step (what you are counting in) 1 by typing in 1 and press




Factor Pairs Cntd.

- You should now have a table with the first line as 0 and - - -
- Use your  and  arrow keys to scroll through the table.
- Anything in the ANS column with a decimal is NOT a factor because it has a remainder.
- Your factors are 1 and 42, 2 and 21, 3 and 14, 6 and 7.



Remember that the - - - - line means that the answer is undefined 😊

Remember that you can go up the table
Press 
And look at the negative side of the number line as well

Prime Factors (Grd 7)

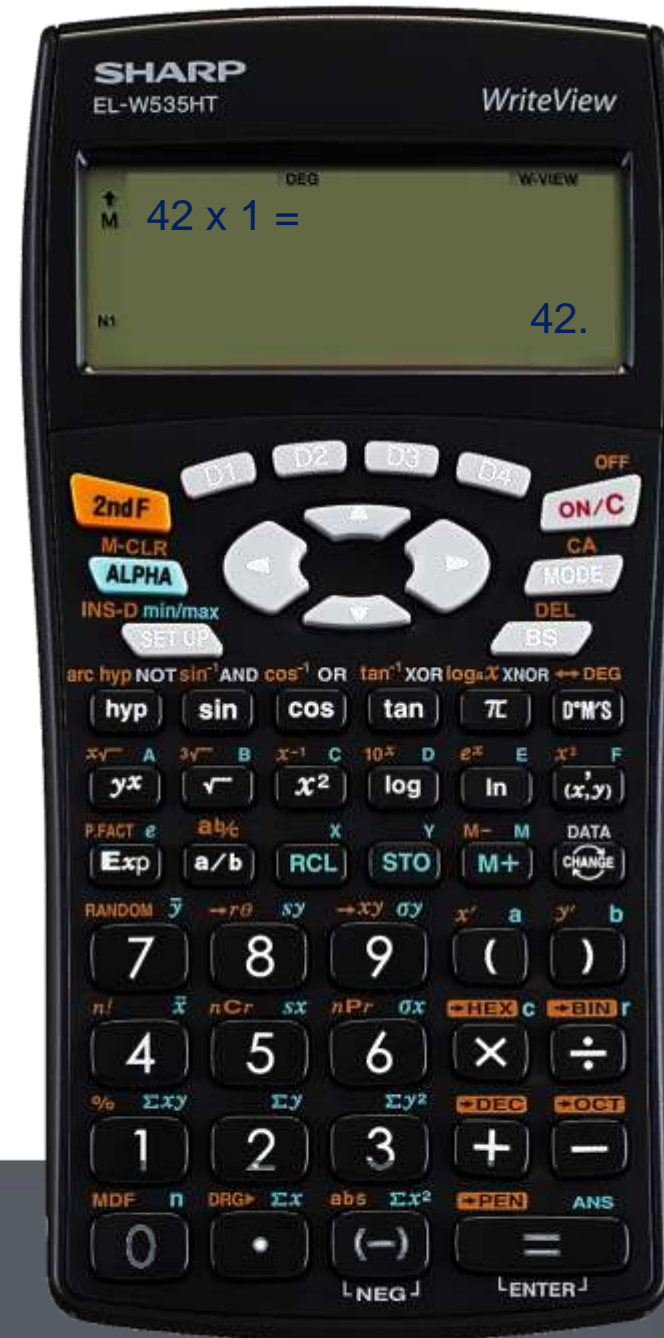
- Press **MODE** 0
- Prime Factorisation
 - Type in the number you want to find prime factors of e.g. 42.

- Press **=**
ENTER
- Press **2ndF** **Exp**



Properties of Whole Numbers

- Add 0 to anything and you are left with that same number
- Multiply anything with 0 and you are left with 0.
- Multiply anything with 1 and you are left with the same number.
- Have students do different examples to see how the pattern works.



Commutative Property

- the shifting without changing rule for plus and minus.
- To prove this rule simply enter the sum or product in different ways:
 - $2 + 3$ is the same as $3 + 2$
 - 4×5 is the same as 5×4
 - And so on
 - Let the children practice with their own examples.



Associative Property

- The order of adding doesn't matter:
 - Try $1 + 2 + 3 + 4$
 - And $2 + 3 + 4 + 1$
 - And $4 + 3 + 2 + 1$
 - And so on....






Distributive Property

- You can multiply the outside number with each of the numbers inside the brackets and it will be the same as adding all the numbers first and then multiplying by the outside number.
- E.g. $3(4 + 5)$
 - We can type in $3 \times 4 + 3 \times 5$
 - And we can type in $3 \times (4 + 5)$



Don't forget the competition 😊

- Drill mode (Press  2 0)
- Choose 25 questions (press )
- Choose + - x ÷ (press )
- Fastest time this week wins a microwave 😊



Thank you 😊

Check out www.e-classroom.co.za and www.mathsatsharp.co.za

And don't forget to like us on Facebook 😊

SEARTEC 

Proud distributor of: **SHARP**