TOP TEN: DECIMALS, FACTORS, INTEGERS A

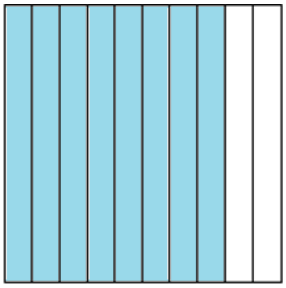
ANSWER GUIDE

Name: _____ **Class:** ____ **Date:** _____

Growth (pre/post): +

4G

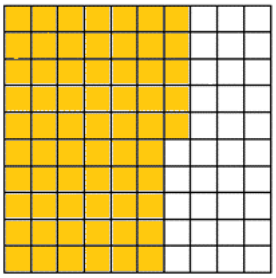
You eat 8 slices of cake. Shade to show how much you ate:



In words: *8 tenths*

As a decimal (digits): *0.8*

The orange shows how much grass a cow ate in the paddock today.



In words: *sixty-five hundredths*

As a decimal (digits): *0.65*

As a decimal: *2.4*

2 **wholes and** *4* **tenths**

I am trying to make a 1 metre fishing rod. So far, I have 3 sticks that are 1cm. I have 6 sticks that are 10cm long.

0 **wholes** *6* **tenths** *3* **hundredths**

6 3 **hundredths**

As a decimal: *0.63*

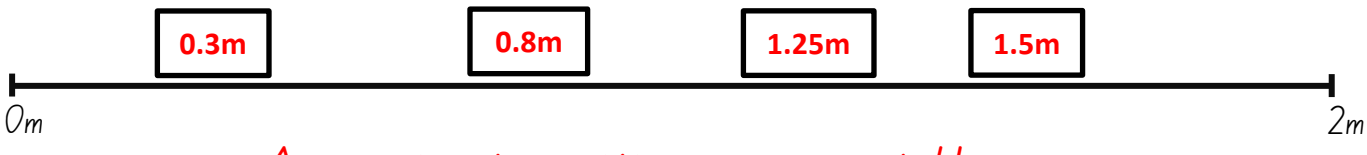
4H

Draw coins to show the value of these decimals as money:

0.45	0.5	0.8
 *or any coins that total to 45 cents*	 *or any coins that total to 50 cents*	 *or any coins that total to 80 cents*

4I

Mark these metre values on this number line:
Use and mark benchmark numbers to help you.



Approximate positions are acceptable.

4J

In one whole, how many tenths are there?	In one tenth, how many hundredths are there?
ten	ten

Show different ways to make 0.65 (rename it):

6 tenths and 5 hundredths

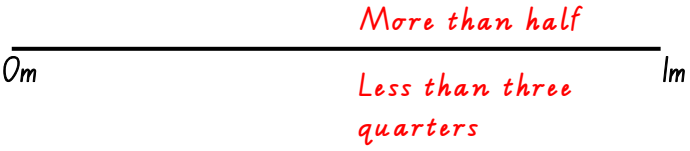
65 hundredths

0.65 wholes

Draw coins for 0.65:

or any that make 65 cents

Mark 0.65 along this 1 metre length of wood:



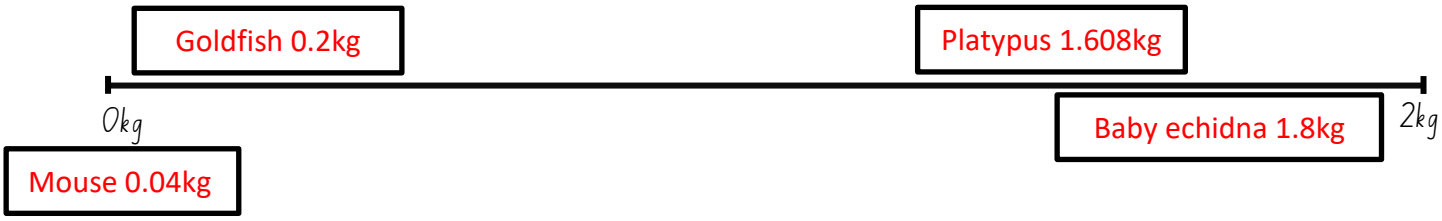
Rename using place value and the real-life values of tenths and hundredths:

I have 5 tenths of $1. How many hundredths do I have?	I have 9 hundredths and 3 tenths of one metre, so I have:
50 hundredths In real-life, this means I have: 50 cents	39 hundredths In real-life, this means I have: 39 centimetres

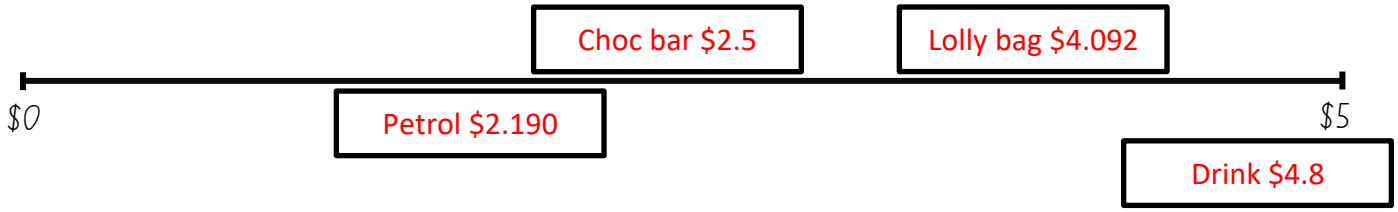
5C **Compare the decimals. Justify your answer for full marks.**

Use the greater/less than or equal signs > = < to compare the decimals:	I know this because… (prove it using money, measurement or place value):
0.25 < 0.4	4 tenths is more than 2 tenths or similar reasoning
0.601 < 0.70	7 tenths is more than 6 tenths or similar reasoning
1.5 > 0.62	1 whole is more than 0 wholes or similar reasoning

5C Mark these weights **as decimals** on this number line: *approximate is acceptable*



5C Mark these prices **as decimals** on this number line: *approximate only*



5D **Round these decimals and estimate for these problems:**

Number	Nearest whole	Nearest tenth	Nearest hundredth
1.56	2	1.6	1.56
3.748	4	3.7	3.75

I bought 5 milkshakes for my family on Sunday morning. Each milkshake was $4.65. I only have cash (notes). Draw the notes I should use to pay:

Andrea is measuring wood for a deck she is building. She needs 31.078 metres. The wood comes in 3m lengths. How many should she buy?

11 (because 3 × 10 = 30 and would leave her short of supplies in real-life)

I have $15. Each apple is $0.96. Around about how many apples can I buy?

15

(because each is about $1)

6A **Decimals by powers of 10:**

0.6 ÷ 10 = 0.06	100 lengths of 0.08m of pipe = 8m	$0.05 x 1000 = 50
How did you do it? *one place value lower or similar (no algorithms)*	**How did you do it?** *two place values higher or similar (no algorithms needed)*	**How did you do it?** *three place values higher or similar (no algorithms)*

6B **Write how you would say larger place values in abbreviated real-life form:**

$1 200 000	6 000 000 000 YouTube hits	800 000 Tik Tok followers
1.2M or 1.2 million	6B or 6 billion	800K

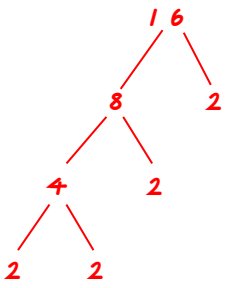
+200

5E Find all the factors of 24

Any format is acceptable (T-chart, factor rainbow, factor fireworks)

1 2 3 4 6 8 12 24

6C Show the prime factorisation of 16



$= 2 \times 2 \times 2 \times 2$

optional: 2^4

6D Is 47 prime or composite? Prove your answer.

Prime because its only factors are 1 and 47.

It is not divisible by 2 (not even) and so also not divisible by 4 or 8 or 6. Its digits do not add to 9 or a multiple of 3 so it is also not divisible by 3 or 9.

6D I am buying balloons for a party. One bulk pack has 67 balloons and the other has 64 balloons. Both are the same unit price (it is the same cost per balloon). I want the balloons arranged in equal groups. Which pack should I choose if I want to try to avoid any remainders/leftover balloons? Prove it.

64 is composite and has 7 different factors (including 8 groups of 8 as a square number). 67 is prime so there will not be any options for equal groups except for 1 big group of 67 ballons. Definitely buy the 64 pack.

6E Mark these integers on this vertical number line:

Temperature at Mt Buller is -5 degrees.	I dive -65m underwater.	I have $45 in my bank.
I lose $175 gambling.	I climb 156m up a mountain.	It is -89°C in Antarctica.

Look for approximately correct placement and benchmarking.

I have negative $50 in my bank account. What does that mean in real life?

You owe the bank $50 so you are $50 in debt to the bank.

-200

6F Mark these coordinates on the Cartesian Plane:

Red dot (5, 3) ● Green dot (-4, -3) ●

Blue dot (-2, 0) ● Black dot (-2, -1) ●