

Term 3 week 10 Extra for experts

Monday- SA



MIGHTY MATHS NUMERACY PROJECT

Rewrite the equations and calculate the answers.

$$(8 \times 12) - (7 \times 12) \gg \dots\dots\dots$$

$$(4 + 6) \times (8 + 12) \gg \dots\dots\dots$$

$$(6 \times 9) + (3 \times 9) \gg \dots\dots\dots$$

$$8^2 - 5^2 \gg \dots\dots\dots$$

$$3^3 + 9^2 \gg \dots\dots\dots$$

$$2 \times (5 + 2)^2 \gg \dots\dots\dots$$

$$(8 - 6)^3 \div (10 - 2^3) \gg \dots\dots\dots$$

$$[40 \div (3 + 2)]^2 \gg \dots\dots\dots$$

Replace the with +, -, + or \times

$$3 + 15 \dots 3 = 8$$

$$10 \dots 7 + 15 = 18$$

$$8 \dots 4 - 10 = 22$$

$$(18 \dots 2) \div 10 = 2$$

$$(10 \dots 3) \dots 7 = 1$$

$$15 \dots 3 + 2 \dots 5 = 15$$

$$(18 \dots 6) \times 3 \dots 2 = 38$$

$$32 \dots (8 \dots 2) = 8$$

Lolly fractions

Leo bought a box of coloured lollies and spread them out on the table in front of him.

He noticed that $\frac{1}{3}$ of all the lollies were red and that $\frac{1}{2}$ of all the lollies were yellow.

The rest of the lollies were made up of other colours.

He also noticed that the number of lollies in the box was always able to be divided by both 3 and 2.

How many lollies could there have been in the box? How many would have been red, yellow and other colours?



The first one has been done for you.

Number of lollies	Red lollies	Yellow lollies	Other colours
6	2	3	1

Tuesday – MS

1. Fraction practice.

Match the letters to the answers to crack the code.

A Half of a half.

- E 3kg of mushrooms are put into 10 bags. What fraction of a kilogram per bag?
- F How many glasses of $\frac{1}{5}$ L can be poured from a 3 L bottle?
- G Each child at a party was given $\frac{2}{3}$ of a bar of chocolate. If there were 6 bars of chocolate, how many children were there?
- I Simplify the fraction $\frac{72}{360}$
- L Write as a mixed number $\frac{17}{6}$
- N Which is the largest fraction? $\frac{5}{12}$, $\frac{6}{11}$, $\frac{7}{15}$
- O What is $\frac{8}{9}$ of 45?
- S $\frac{2}{3}$ of a sum of money is \$60. How many dollars is the total sum?
- T What is $\frac{5}{3}$ of $\frac{6}{7}$?
- U $\frac{3}{4} + \frac{3}{2}$
- W $6:2 = ? :9$

— — — — —
 $\frac{1}{5}$ $\frac{10}{7}$ 27 $\frac{1}{4}$ 90 $2\frac{1}{4}$ 90 $\frac{1}{5}$ $\frac{6}{11}$ 9

— — — —
 15 40 27 $2\frac{5}{6}$

— — — — — — — —
 $2\frac{5}{6}$ $\frac{1}{4}$ $\frac{6}{11}$ 9 $2\frac{1}{4}$ $\frac{1}{4}$ 9 $\frac{3}{10}$

2. Decimal practice.

Match the letters to the answers to read the message below.

- A Place value of 7 in 2.73
- C Write $1 \times 10 + 1 \times \frac{1}{100}$ as a decimal
- E Which number is bigger: 1.01 or 1.10?
- H Which number is smallest: 2.4, 2.04, 2.44?
- I $16.8 - 14.4$

K Increase 2.4 by 0.04

M Reduce 1.35 by 0.34

N 2.76×10

O $276 \div 100$

R 0.5×0.4

S Round 0.28 to once decimal place

T Round 2.142 to 2 d.p.

U 3.4×100

V \$ cost of 2.5 kg at \$1.20 per kilogram

W 5 kg costs \$4.00. \$ cost per kilogram?

Y $0.036 \div 1.2$

— — — — — — — — — — — — — — —
0.80 2.4 2.41 2.04 2.76 27.6 1.10 0.80 0.1 2.41 10.01 2.04

— — — — — — — — — — — — — — —
0.03 2.76 340 2.44 27.6 2.76 0.80 2.41 2.04 1.10 2.41 2.4 1.01 1.10

—
0.80 2.4 2.41 2.04 2.41 0.80 2.76 0.80 0.1 2.41 10.01 2.04 1.10 0.3

— — — — — — — — — — — — — — —
0.03 2.76 340 0.1 0.2 1.10 27.6 1.10 3 1.10 0.2

— — — —
0.3 340 0.2 1.10

Wednesday – GRI

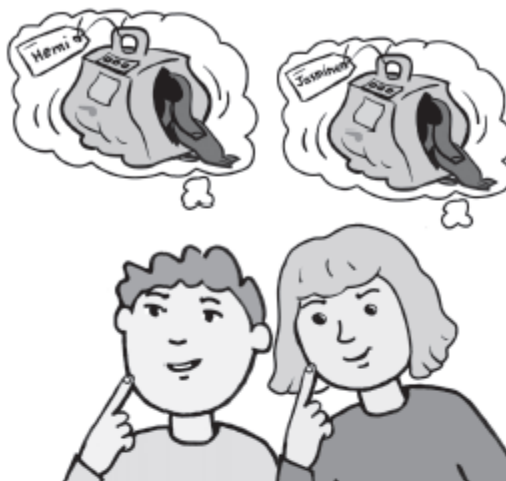
How many combinations? 1

Jasmine and Hemi had forgotten the order of numbers for the combination locks on their suitcases.

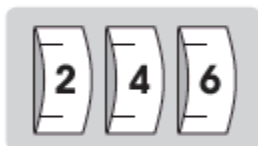
Luckily they could remember what the numbers were.

Jasmine's numbers were **2, 4** and **6**. Hemi's numbers were **4, 6**, and **8**.

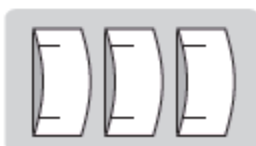
They phoned a friend who told them that there were only **6** possible combinations for when 3 numbers were used. They said it wouldn't take Jasmine and Hemi long to work out the correct combinations to unlock each of their suitcases.



Jasmine started off with 2, 4 and 6. Write all the other possible combinations.



Hemi's started off with 4, 6, and 8. Write all the other possible combinations.



Thursday – RM

A Logic Based Mystery. The Mystery Math Ball

Jennifer received an invitation in the mail. She really wanted to go to the ball however the date, place and who was hosting it had to be figured out.

Can you help her to figure out this information so that she can go to the Mystery Math Ball?

DATE; Use the clues and the calendar to help Jennifer figure out the date of the "Mystery Math Ball"

	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			

Clues 1. The date is not a prime number.

2. The date is not a multiple of 4 or 5

3. The date is a multiple of 2

4. The date is divisible by 6.

5. If you have eliminated dates correctly, you should have two possible dates left.

The date of the Mystery Math Ball is the greater number of these two dates.

WHEN IS THE BALL? -----

MYSTERY PLACE

Next Jennifer must figure out where the Mystery Math Ball will be held.

Can you help her? Use the clues provided to figure out the 5-digit house number.

Clues, 1. The house number is an even number.

2. The product of the digits in the one's place and the hundred's place is 6. The sum of these two digits is 5.

3. The digit in the ten thousand's place is the difference between the hundred's digit and the one's digit.

4. The ten's digit is the greatest even digit.

5. The sum of the digits in the ten thousand's place and the thousand's place is equal to the digit in the ten's place.

WHERE IS THE MYSTERY MATH BALL? _____

MYSTERY HOST

Jennifer's last task is to figure out who is hosting the "Mystery Math Ball" so that she can contact the host for final details about the party. She knows the host is 16 years old and is one of the following people- John, Joe, Jill, Janet, or Jim.

She knows that these five people's ages range from 14- 18 years old. Use the deductive reasoning chart and the clues provided to help Jennifer figure out who is hosting the "Mystery Math Ball"

18 17 16 15 14

	18	17	16	15	14
John					
Joe					
Jill					
Janet					
Jim					

Clues:

1. Jim is 3 years younger than John.

2. Jim is younger than Joe.

3. Janet is older than Jill.

4. Jill is not 15 years old.

5. Jim is not the youngest person.

6. John is the second- oldest person.
7. Joe is 2 years younger than Janet. WHO IS THE HOST? _____

Friday – AZI

We are learning to use appropriate strategies to solve the problems below

Activity 1:

MAGIC SQUARE

A magic square is a square where each line of 3 numbers (vertical, horizontal and diagonal) adds up to the same amount.

1. Write the numbers -4, -3, -2, -1, 1, 2, 3 and 4 in the correct place so that each line (vertical, horizontal and diagonal) adds up to 15.

	0	

- 2) Can you make a new magic square using the digits -6, -5, -4, -3, -2, -1, 1, 2 so that each line adds up to -6?

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Activity 2:

MAKE 100

Use the numbers in the grid each time.

27	45	63	51	84
26	18	74	22	49
55	67	16	82	33

Challenge 1

Find pairs of numbers that add up to 100. Try to find 6 different pairs.

Challenge 2

Try to find sets of 3 numbers that add up to make 100. Try to find 3 different answers.

Activity 3:

NUMBER GRID CHALLENGE 4: TARGET 100

Start the maze with zero.

You must finish the maze with a total of 100. Your route can go **right** or **down** at each turn.

There are 3 possible routes. Highlight a route in each of the number grid below

START	14	7	13	15
12	9	11	26	21
16	5	12	19	10
13	10	17	24	11
8	20	4	15	FINISH

START	14	7	13	15
12	9	11	26	21
16	5	12	19	10
13	10	17	24	11
8	20	4	15	FINISH

START	14	7	13	15
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12	9	11	26	21
16	5	12	19	10
13	10	17	24	11
8	20	4	15	FINISH

Find the route with the highest total. Highlight the route in the number grid below

START	14	7	13	15
12	9	11	26	21
16	5	12	19	10
13	10	17	24	11
8	20	4	15	FINISH

Find the route with the lowest total. Highlight the route in the number grid below

START	14	7	13	15
12	9	11	26	21
16	5	12	19	10
13	10	17	24	11

8	20	4	15	FINISH
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