RICH MATHEMATICAL TASK BOOKLET

NUMBER Multiplication & Division

YEAR 4

Copy Masters

Task 1

For Polyfest each group of dancers is organised into rows.

If there 15 rows of dancers and 9 dancers in each row, how many dancers are there altogether?

If there 8 rows of dancers and 21 dancers in each row, how many runners are there altogether?

If there 44 rows of dancers and 5 dancers in each row, how many dancers are there altogether?

Show how you solved the problem using numbers and a representation.

Task 1 (independent)

Aunty has 48 feijoas in one bag and 54 feijoas in another bag. How many feijoas does aunty have altogether?

Koru picked 54 lemons from his tree. He kept some lemons and gave 26 to the neighbour. How many lemons did Koru keep?

Niko had 27 plums in a bag. He picked some more plums and now he has 73 plums. How many plums did Niko pick?

Mona collected 163 shells and her cousin collected some more. Now they have 202 shells. How many did cousin collect?

Mere has 126 pink beads in one bag. She also has some yellow beads in another bag. Altogether she has 301 beads. How many yellow beads does she have?

Task 2

Tiana is setting out chairs in church. She has 96 chairs to organise into rows.

What are all the different ways she can organise them so that there are the same number of chairs in every row?

Task 2 (independent)

Work with a partner and make flash cards to practice your 2, 3, 5, and 10 times-tables. Write the fact on one side and the answer on the other side. Test each other and note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Tatiana is solving some multiplication problems.

$9 \times 7 = 63$

$7 \times 9 =$

$21 \times 22 = 462$

$22 \times 21 =$

She says that she does not have to work the answer out for the second equation in each set.

Do you agree with Tatiana?

What do you notice?

Make a conjecture.

Use numbers and the material to explore and prove the conjecture.

Does this work with other operations? Try it with addition, subtraction, and division.

Task 3

Lotti is thinking about the rides at Rainbows End, and how long you have to wait for each ride so she can plan her day.

The Log Flume can fit 4 riders.

The ride goes 63 times each hour.

How many riders can go on the Log Flume in an hour?

The Fear fall ride can fit 18 riders.

The ride can go 9 times each hour.

How many riders can go on the Fear Fall every hour?

The rollercoaster can fit 28 people.

The ride can go 8 times each hour.

How many riders can go on the rollercoaster every hour?

What ride do you think will have the shortest wait?

Task 3 (independent)

Use your flash cards to practice your 2, 3, 5, and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Record factors pots and balloons with all the factors for the following numbers:

8	12	16	20
30	45	80	

How would you explain what factors are to a younger person?

Task 4

Hoana and her brother Wiremu are comparing their collections.

Wiremu has 14 gemstones. Hoana has eight times as many gemstones.

How many gemstones does Hoana have?

Hoana has 37 Pokemon cards. Wiremu has five times as many Pokemon cards.

How many Pokemon cards does Wiremu have?

Wiremu has 15 marbles, Hoana has twelve times as many marbles.

How many marbles does Hoana have?

Task 4 (independent)

Make flash cards for the 4 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Solve the following problems:

$12 \times 8 =$

$11 \times 32 =$

$74 \times 6 =$

$16 \times 13 =$

Task 5

Becky is thinking about how far different creatures can move in an hour.

A pig can move 11 metres in an hour.

How far can a pig move in 8 hours?

A polar bear can move 18 metres in an hour.

How far can a polar bear move in 8 hours?

A cheetah can move 74 metres in an hour.

How far can a cheetah move in 8 hours?

Make sure you can explain and justify your explanation in different ways.

Task 5 (independent)

Make flash cards for the 6 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Are these number sentences true or false? Explain why.

$23 \times 49 = 49 \times 23$

$19 + 19 + 19 + 19 + 19 + 19 + 19 = 19 \times 6$

$700 = 7 \times 100$

$14 \times 7 = (10 \times 7) + 14 + 14$

$8 \times 23 = (8 \times 20) + (8 \times 3)$

Find the missing number:

$42 \times 8 = 8 \times \_\_$

$14 \times 4 = (10 \times 4) + (\ \_\_ \times 4)$

$23 \times 6 = 23 + 23 + 23 + 23 + 23 + \_\_$

$\_\_ = 12 \times 5$

$(10 \times \_\_\ ) + (7 \times 9) = 17 \times 9$

Task 6

In the Great Divide, the people in the race begin in rows.

There are 55 people and they get into rows of 5.
How many rows altogether will there be?

There are 52 people and they get into rows of 4.
How many rows altogether will there be?

There are 98 people and they get into rows of 7.
How many rows altogether will there be?

Task 6 (independent)

Use the flash cards for the 2, 3, 4, 5, 6 and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

The runners are in rows to start the race.

There are 65 people and they get into rows of 5.

How many rows altogether will there be?

There are 42 people and they get into rows of 3.

How many rows altogether will there be?

There are 78 people and they get into rows of 6.

How many rows altogether will there be?

Task 7

Lani is sorting beads into packets to sell at market day.

She has 106 beads to put into 8 packets.

How many beads will be in each packet?

How many will be left over?

She has 230 beads to put into 15 packets.

How many beads will be in each packet?

She has 260 beads to put into 18 packets.

How many beads will be in each pack?

Task 7 (independent)

Use the flash cards for the 2, 3, 4, 5, 6 and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Solve the problems below:

117 ÷ 9 =

156 ÷ 12 =

352 ÷ 32 =

294 ÷ 21 =

Task 8

Sose and Lagi are making ula lole for graduation.

They have 105 mini chocolate bars.

They want to put 7 mini chocolate bars on each ula lole.
How many ula lole can they put chocolate bars on?

They have 224 mackintosh lollies.

They want to put 16 mackintosh lollies in each ula lole.
How many ula lole can they put mackintosh lollies on?

They have 461 fruit bursts.

They want to put 21 fruit bursts in each ula lole.
How many ula lole can they put fruit bursts on?

Task 8 (independent)

Use the flash cards for the 2, 3, 4, 5, 6 and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Sose and Lagi are making ula lole for graduation.

They have 256 fruit bursts.

They want to put 8 fruit bursts on the ula lole.

How many ula lole can they make?

They want to put 16 fruit bursts on the ula lole.

How many ula lole can they make?

They want to put 4 fruit bursts on the ula lole.

How many ula lole can they make?

What patterns do you notice?

Task 9

Solve the problems below:

208 ÷ 13 =

285 ÷ 19 =

572 ÷ 26 =

Task 9 (independent)

Use the flash cards for the 2, 3, 4, 5, 6 and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

George making goodie bags for his birthday.

George has 102 M&Ms to put into 12 bags.

How many M&Ms will be in each bag?

How many will be left over?

George has 149 jellybeans to put into 12 bags.

How many jellybeans will be in each bag?

How many will be left over?

George has 53 lollipops. He wants to put 3 in each bag.

How many bags can he fill?

How many will be left over?

George has 75 fruitbursts. He wants to put 4 in each bag.

How many bags can he fill?

How many will be left over?

Task 10

Mohammed is solving the following problems:

$21 \times 45 = 945$

$45 \times 21 =$

$945 \div 21 =$

$945 \div 45 =$

He says that he does not have to work the answers as he already knows them.

Do you agree with Mohammed?

What do you notice?

Make a conjecture and use numbers and the material to explore and prove the conjecture.

Task 10 (independent)

Use the flash cards for the 2, 3, 4, 5, 6 and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

Make an array and record the following as multiplication and division number sentences:

9 by 6

12 by 8

7 by 15

18 by 9

Task 11

Iosefa is packing panikeke to sell at Pasifika festival.

Iosefa has made 130 panikeke.

He shares them equally on 8 large trays.

What fraction of the panikeke are on each tray?

How many panikeke are on each tray?

How many are left over?

Iosefa has made another 57 panikeke.

He shares them equally on 6 trays.

What fraction of the panikeke are on each tray?

How many panikeke are on each tray?

How many are left over?

Task 11 (independent)

Use the flash cards for the 2, 3, 4, 5, 6 and 10 times-tables. Note the ones that you don't know instantly and practice writing these out and saying it aloud to yourself four times.

The baker has baked 86 cupcakes.

She shares them equally on 5 trays.

What fraction of the cupcakes are on each tray?

How many cupcakes are on each tray?

How many are left over?

The baker has baked 65 cupcakes.

She shares them equally on 3 trays.

What fraction of the cupcakes are on each tray?

How many cupcakes are on each tray?

How many are left over?

Task 12

At Garden to Table the classes are planting potatoes. They are trying to work out which class will have the most potato plants.

Who would get the most?

One third of a bag of 39 seedling potatoes

Three quarters of a bag of 32 seedling potatoes

Three eighths of a bag of 48 seedling potatoes