RICH MATHEMATICAL TASK BOOKLET

NUMBER Multiplication & Division

YEAR 3

Copy Masters

Task 1

The bossy littlest ant likes the ants to be organised in rows.

If there 5 rows of ants and 7 ants in each row, how many ants are there altogether?

If there 8 rows of ants and 6 ants in each row, how many ants are there altogether?

If there 12 rows of ants and 5 ants in each row, how many ants are there altogether?

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

Task 1 (independent)

Aunty has 22 feijoas in one bag and 14 feijoas in another bag. How many feijoas does aunty have altogether?

Mona collected 54 shells and her cousin collected some more. Now they have 92 shells. How many did cousin collect?

Mere has 37 pink beads in one bag. She also has some yellow beads in another bag. Altogether she has 76 beads. How many yellow beads does she have?

Koru picked 31 lemons from his tree. He kept some lemons and gave 16 to the neighbour. How many lemons did Koru keep?

Niko had 24 plums in a bag. He picked some more plums and now he has 73 plums. How many plums did Niko pick?

Task 2

The bossy littlest ant has 48 marching ants to organise into rows.

What are all the different ways she can organise them so that there are no ants left over?

Task 2 (independent)

The bossy littlest ant likes the ants to be organised in rows.

If there 9 rows of ants and 5 ants in each row, how many ants are there altogether?

If there 7 rows of ants and 9 ants in each row, how many ants are there altogether?

If there 11 rows of ants and 7 ants in each row, how many ants are there altogether?

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

Task 3

The bossy littlest Ant marched 8 metres in a minute.

Katie Ant marched 9 times further.

How far did Katie Ant march?

The bossy littlest Ant marched 13 metres in two minutes.

Soane Ant marched 5 times further.

How far did Soane Ant march?

The bossy littlest Ant marched 15 metres in three minutes.

Louie Ant marched 6 times further.

How far did Louie Ant march?

Task 3 (independent)

The bossy littlest ant has 24 marching ants to organise into rows.

What are all the different ways she can organise them so that there are no ants left over?

The bossy littlest ant has 36 marching ants to organise into rows.

What are all the different ways she can organise them so that there are no ants left over?

The bossy littlest ant has 60 marching ants to organise into rows.

What are all the different ways she can organise them so that there are no ants left over?

Task 4

When ants see food, they run very fast.

Nikki Ant can run 14 metres every minute towards bread.

How far does Nikki Ant run in 9 minutes?

Tyler Ant can run 23 metres every minute towards cake.

How far can Tyler Ant run in 9 minutes?

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

Task 4 (independent)

Work with a partner to make flash cards to practice your 2s and 10s times-tables. Write the equation on one side and the answer on the other side. Test each other.

Solve the following problems:

$8 \times 7 =$

$4 \times 11 =$

$15 \times 6 =$

$22 \times 8 =$

Task 5

Lucia is solving the following problems:

$4 \times 8 = 32$

$8 \times 4 =$

$23 \times 7 = 161$

$7 \times 23 =$

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

Do you agree with Lucia?

What do you notice?

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

Task 5 (independent)

Practice your 2 and 10 times-tables with your flash cards and a partner.Make flash cards to practice your 5 and 3 times-tables.

Are these number sentences true or false? Explain why.

$10 \times 9 = 9 \times 10$

$6 + 6 + 6 + 6 = 4 \times 3$

$30 = 3 \times 10$

$34 \times 89 = 89 \times 10$

$7 \times 3 = 7 + 7 + 7$

Find the missing number:

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

$5 + 5 + 5 + 5 = 5 \times \_\_$

$\_\_ = 11 \times 6$

$\_\_ + 8 + 8 + 8 + 8 = 5 \times 8$

Task 6

The ants are in rows to march off get food. Bye bye Ants!

There are 35 ants, and they get into rows of 5.
How many rows altogether will there be?

There are 99 ants, and they get into rows of 9.
How many rows altogether will there be?

There are 72 ants, and they get into rows of 6.
How many rows altogether will there be?

Task 6 (independent)

Use your flash cards to practice your times-tables for the 2s, 3s, 5s, 10s.Write out any that you don't know and repeat the fact to yourself in a quiet voice four times.

The ants are in rows to march to get food.

There are 66 ants, and they get into rows of 6.

How many rows altogether will there be?

There are 75 ants, and they get into rows of 5.

How many rows altogether will there be?

There are 42 ants, and they get into rows of 7.

How many rows altogether will there be?

Task 7

Timo is sorting sunflower seeds into packets to sell at market day.

He has 42 seeds to put into 3 packets.
How many seeds will be in each packet?

He has 52 seeds to put into 4 packets.
How many seeds will be in each packet?

He has 78 seeds to put into 6 packets.
How many seeds will be in each pack?

Task 7 (independent)

Use your flash cards to practice your times-tables for the 2s, 3s, 5s, 10s.

Write out any that you don't know and repeat the fact to yourself in a quiet voice four times.

Solve the problems below:

72 ÷ 8 =

55 ÷ 5 =

36 ÷ 3 =

60 ÷ 4 =

Task 8

Leva is helping to arrange some of the baskets of taro for gifts for a hifi ulu (hair-cutting ceremony). He has 96 taro.

Leva wants to put 4 taro in each basket. How many baskets can he fill?

If Leva wants to put 8 taro in each basket. How many baskets can he fill?

If Leva wants to put 2 taro in each basket. How many baskets can he fill?

Task 8 (independent)

Use your flash cards to practice your times-tables for the 2s, 3s, 5s, 10s.

Write out any that you don't know and repeat the fact to yourself in a quiet voice four times.

Leva is helping to arrange some of the baskets of taro for gifts for a hair-cutting ceremony. He has 70 taro.

Leva wants to put 5 taro in each basket. How many baskets can he fill?

If Leva wants to put 10 taro in each basket. How many baskets can he fill?

If Leva wants to put 2 taro in each basket. How many baskets can he fill?

If Leva wants to put 7 taro in each basket. How many baskets can he fill?

What patterns do you notice?

Task 9

Tiare is helping to make some ‘ei katu.

She has 78 red flowers.

Tiare would like to put 6 red flowers in each ‘ei katu. How many can she make?

If Tiare would like to put 2 red flowers in each ‘ei katu. How many can she make?

If Tiare would like to put 3 red flowers in each ‘ei katu. How many can she make?

Task 9 (independent)

Use your flash cards to practice your times-tables for the 2s, 3s, 5s, 10s.

Write out any that you don't know and repeat the fact to yourself in a quiet voice four times.

Sosefina is making goodie bags for her birthday.

Sosefina has 36 M&Ms to put into 3 bags.

How many M&Ms will be in each bag?

Sosefina has 80 jellybeans to put into 5 bags.

How many jellybeans will be in each bag?

Sosefina has 28 lollipops. She wants to put 2 in each bag.

How many bags can she fill?

Sosefina has 36 fruitbursts. She wants to put 4 in each bag.

How many bags can she fill?

Task 10

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

Can you help them by working out which way would get the most?

Room One divides a bag of 32 seedling potatoes between two groups.

Room Two divides a bag of 48 seedling potatoes between four groups.

Room Three divides a bag of 76 seedling potatoes between eight groups.

What fraction of the bag of seedling potatoes does each group in the different classes get?

How many seedling potatoes do they get?

Task 10 (independent)

Use your flash cards to practice your times-tables for the 2s, 3s, 5s, 10s.

Write out any that you don't know and repeat the fact to yourself in a quiet voice four times.

Record the following as division and as fractions:

Example: What is a half of 60?

$\frac{1}{2}$ of 60 = 30

60 ÷ 2 = 30

What is half of 20?

What is one quarter of 40?

What is half of 80?

What is half of 100?

What is a quarter of 100?

What is half of 60?

What is one quarter of 60?

What patterns and relationships do you notice?

Task 11 (optional task)

The baker has baked 65 cupcakes.

She shares them equally on 5 trays.

What fraction of the cupcakes are on each tray?

How many cupcakes are on each tray?

The baker has baked 69 cupcakes.

She shares them equally on 3 trays.

What fraction of the cupcakes are on each tray?

How many cupcakes are on each tray?

Task 11 (independent)

Use your flash cards to practice your times-tables for the 2s, 3s, 5s, 10s.

Write out any that you don't know and repeat the fact to yourself in a quiet voice four times.

The baker has baked 45 cupcakes.

She shares them equally on 5 trays.

What fraction of the cupcakes are on each tray?

How many cupcakes are on each tray?

The baker has baked 51 cupcakes.

She shares them equally on 3 trays.

What fraction of the cupcakes are on each tray?

How many cupcakes are on each tray?

Task 12 (optional task)

What is the missing number:

$12 + 12 + 12 + 12 + 12 = 12 \times \_\_$

$42 + 42 + 42 + 42 = \_\_ \times 42$

$21 \times 14 = \_\_ \times 21$

$\frac{1}{2}$ of $22 = 22 \div \_\_$

$\frac{1}{4}$ of $\_\_ = 16 \div 4$

$64 \div 2 = \_\_$ of 64

$124 \div 3 = \frac{1}{3}$ of $\_\_$

$\_\_ \times 5 = 5 \times 16$

What patterns and relationships did you use to find the missing numbers?

What conjectures can you make?