# RICH MATHEMATICAL TASK BOOKLET

# NUMBER & ALGEBRA

**Task Copy Masters** 

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Choose a number between 11 – 19 and represent this in as many ways as you can using the tens frames. Record the number sentences that match.

Choose a number between 20 - 30 and represent this in as many ways as you can using the tens frames.

Record addition and subtraction number sentences that match.

Draw the tens frames.

#### Task 1 (independent)

Choose a number between 20 – 30 and draw tens frames that would make the number and write the matching number sentences.

Find different ways to make the number. Draw the tens frames and record the matching number sentences.

Meleana has collected 30 marbles and is putting them in two bags. What are all the different ways that she could put the marbles into the two bags?

Can you record your ideas using drawings and number sentences?

# Task 2 (independent)

Litea has 26 leaves and two bags.

What are the different ways that she could put the leaves into the bags?

Can you record your ideas using drawings and number sentences?

Solve the equations. What do you notice?

3 + 6 = 20 + 10 = 16 + 20 = 20 + 23 = 36 + 23

Represent your thinking using an empty number line.

# Task 3 (independent)

Look for patterns and use these to help you solve the problems below:

4 + 5 =
14 + 5 =
14 + 15 =
24 + 25=
4 + 3 =
13 + 4 =
14 + 13 =
23 + 24 =

What patterns did you notice as you solved these problems?

Solve the equations. What do you notice?

9 - 5 = 19 - 5 = 29 - 10 = 29 - 15 = 89 - 5 =89 - 35 =

Represent your thinking using an empty number line.

# Task 4 (independent)

Solve the following problems:

40 + 10

50 + 10 =

- 10 + 34 =
- 20 + 30 =
- 24 + 30 =

24 + 34 =

What patterns do you notice?

Lily has \$14 in her piggybank. She is given \$15 for her birthday. How many money does Lily have now?

Luka has \$38 in his piggybank. He spends \$11. How much money does he have left?

Tali has \$22 in her piggybank. She is given \$35 for her birthday. How many money does Tali have now?

Luka has \$66 in his piggybank. He spends \$23. How much money does he have left?

61 + 35 =

75 – 42 =

# Task 5 (independent)

Solve the following problems:

56 - 30 = 56 - 35 = 40 + 23 = 45 + 23 = 77 - 60 = 77 - 61 = 65 + 4 =65 + 24 =

What patterns do you notice?

Mikayla has 19 loom bands and makes another 7 loom bands. How many loom bands does Mikayla have?

Wiremu has 17 loom bands and makes another 19 loom bands. How many loom bands does Wiremu have?

Tim has 8 loom bands and makes another 15 loom bands. How many loom bands does Tim have?

Nevaeh has 15 loom bands and makes another 28 loom bands. How many loom bands does Nevaeh have?

#### Task 6 (independent)

Mikayla has 12 loom bands and makes another 9 loom bands. How many loom bands does Mikayla have?

Wiremu has 19 loom bands and makes another 12 loom bands. How many loom bands does Wiremu have?

Tim has 13 loom bands and makes another 8 loom bands. How many loom bands does Tim have?

Nevaeh has 18 loom bands and makes another 13 loom bands. How many loom bands does Nevaeh have?

14 + 8 = 18 + 14 = 8 + 19 = 19 + 18 =

Marlon has 17 Pokemon cards. He gives his friend 8 cards. How many cards does he have now?

Nita has 27 Pokemon cards. She gives her friend 8 cards. How many cards does she have now?

Tere has 27 Pokemon cards. He gives his friend 18 cards. How many cards does he have now?

Tevita has 24 Pokemon cards. He gives his friend 15 cards. How many cards does he have now?

Sara has 44 Pokemon cards. She gives her friend 25 cards. How many cards does she have now?

## Task 7 (independent)

Marlon has 16 Pokemon cards. He gives his friend 7 cards. How many cards does he have now?

Nita has 26 Pokemon cards. She gives her friend 17 cards. How many cards does she have now?

Tevita has 24 Pokemon cards. He gives his friend 15 cards. How many cards does he have now?

Sara has 44 Pokemon cards. She gives her friend 25 cards. How many cards does she have now?

15 - 6 = 25 - 16 = 26 - 17 = 46 - 17 =

Work with your partner to work out which number sentences are true or false.

99 = 102 14 + 9 = 23 + 6 25 = 12 + 13 16 + 18 = 15 + 19 13 - 8 = 14 - 9 24 - 16 = 24 - 16 1002 = 1002

Explain why you think the number sentences are true or false.

## Task 8 (independent)

Write your own set of true and false number sentences.

Give your true and false number sentences to your classmates to solve.

Make sure you ask them to explain and justify why they think they are true or false and see if you agree!

Can you find the missing numbers?

$$17 + 6 = \_ + 5$$

$$24 + 19 = 26 + \_$$

$$16 + \_ = 17 + 28$$

$$+ 37 = 56 + 39$$

# Task 9 (independent)

Find the missing number

33 + 9 = \_\_ + 8 45 + 17 = 46 + \_\_ \_\_ + 26 = 57 + 28 117 + \_\_ = 127 + 16

Can you find the missing numbers?

$$13 - 8 = -7$$

$$21 - 17 = 20 - -$$

$$23 - - = 24 - 6$$

$$- 38 = 62 - 39$$

# Task 10 (independent)

Find the missing numbers:

$$12 - 5 = 10 - \_$$

$$25 - 17 = \_ - 19$$

$$34 - \_ = 35 - 27$$

$$\_ - 25 = 51 - 15$$

Open your money box and check how much money you have.

Sort the money into groups with the same value coins and notes.

Record the total amount for each group.

Add the groups together to work out how much money there is altogether.

#### Task 11 (independent)

Open your money box and check how much money you have.

Sort the money into groups with the same value coins and notes.

Record the total amount for each group.

Add the groups together to work out how much money there is altogether.

Phase 1: Year 2: Number and Algebra

#### Task 12

Mere's teacher asked her to solve 18 + 7 = ?

Mere adds the two numbers and writes 18 + 7 = 25.

The teacher then asks her to solve 25 - 18 = ?

Mere says she already knows the answer.

a) How does she know?

b) Do you think this will work for all numbers? If so, how do you know?

c) Can you write your own examples with other numbers where this relationship works?