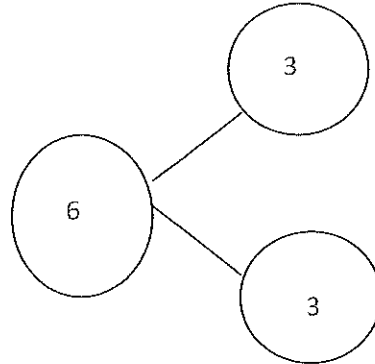
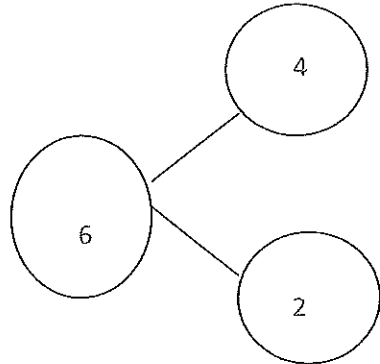


Week 1, Lesson 1

Topic: Number Bonds Diagrams to 20

1. What are 2 different number bonds for the number of smiley faces?

Number bonds encourage part-part-whole understanding. 4 represents the part for large faces and 2 represents the part for small. Together, they represent 6 faces (the whole). Ask your child if they can think of any other ways to make 6.



2. There are 6 smiley faces in all.

There are 4 large smiley faces.

There are 2 small smiley faces.

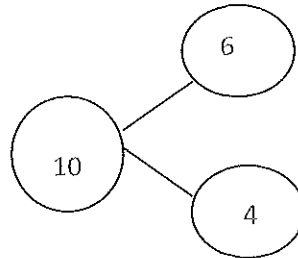
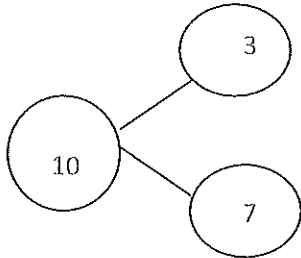
There are 3 green smiley faces.

There are 3 orange smiley faces.

BLANK

Singapore Summer Shape Ups: Level 1 – Thinking Guide

3. What are 2 different number bonds for the number of stars?



The bonds for 10 are crucial for success in place value later on. Reinforce the part-part-whole relationships between these numbers. Be certain the child can identify which are the parts and which is the whole. Again, ask your child if they know some other ways to make 10.

4. There are 3 blue stars. There are 7 yellow stars.

There are 4 big stars. There are 6 small stars.

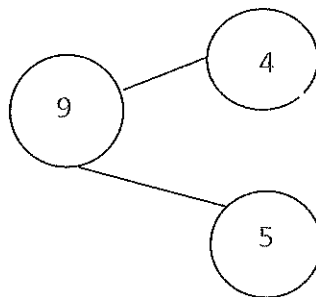
There are 10 stars in all.

5. Use some beans (or some real cookies!) to tell this story.

There were 4 cookies on a plate. Mom added 5 more. Now, there are on the plate.

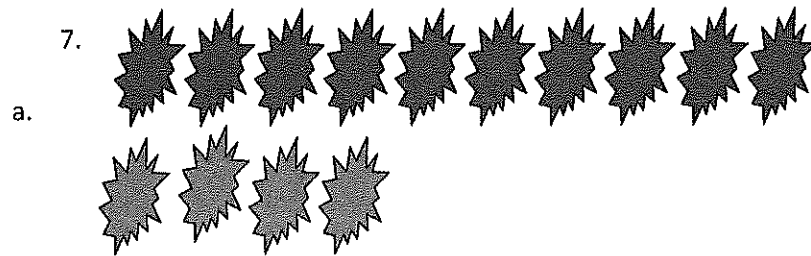
6. Draw a picture of the number story above. Draw a number bond for the story and write a number sentence.

(The inclusion of the number sentence is a skill that brings in the abstract use of number and symbols in mathematics.)



$$4 + 5 = 9$$

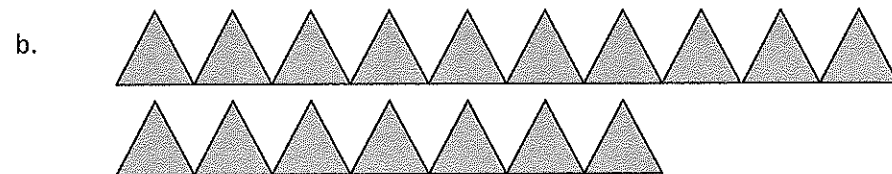
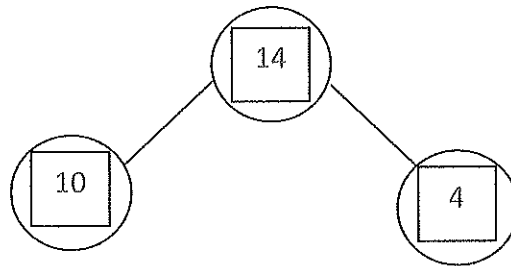
Singapore Summer Shape Ups: Level 1 – Thinking Guide



Write the number sentence. $10 + 4 = 14$

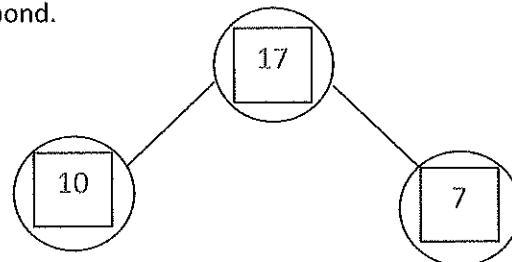
Draw the number bond.

(Changing the orientation of the number bond helps the student rely less on the position of the boxes and instead consider the numbers before them and the part-part-whole relationships.)



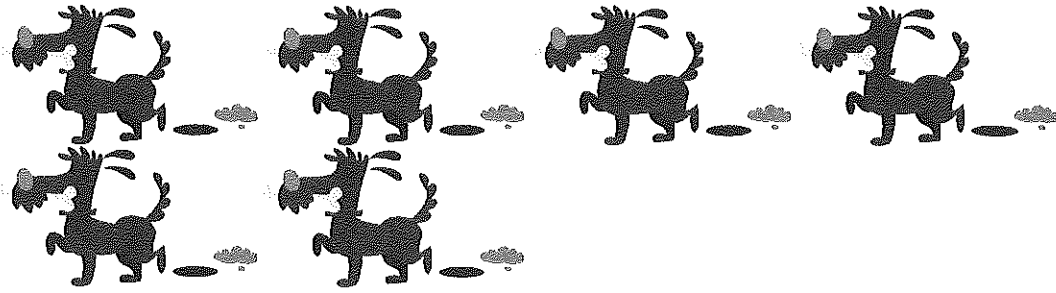
Write the number sentence. $10 + 7 = 17$

Draw the number bond.



Singapore Summer Shape Ups: Level 1 – Thinking Guide

8.



There are six dogs at the dog park. Two more come to play. Now, there are 8 dogs at the dog park.

(Many students will know this relationship quickly. However, if your child experiences difficulty, remind them to draw in the dogs to determine the answer or use concrete materials. Have your child place the beans or pennies on the dogs as the count then put two more counting on from 6.)

9. Use the Make 10 strategy to solve the following problems. Use a ten-frame if you want to!

(The strategy of making 10 is an important strategy for students to use with confidence. It allows them to rearrange numbers in such a way to make it easier to add. Knowledge of number bonds to ten is integral to students' being able to make 10.) *If this is difficult for your child on an abstract level, use an egg carton with 2 cups removed as a Ten-Frame. Have your child show both numbers with counters in 2 separate piles. Put the first number in the ten-frame. Then fill up the frame from the 2nd addend's pile. This makes 10. Then have your child count what is left outside the ten-frame.*

- a. $6 + 7 = 10 + \underline{3}$ (The student knows that $6 + 4 = 10$. So take 4 from the 7 and combine with 6 to make 10. Three are left.)
- b. $9 + 8 = 10 + \underline{7}$ (Take 1 from the 8 and combine with 9. This makes 10. 7 are left)
- c. $4 + 8 = 10 + \underline{2}$ (Take 2 from the 4. Combine with 8 to make 10. 2 are left)
- d. $8 + 5 = 10 + \underline{3}$

10. Solve the following problems: *Concrete materials can be used to help your child.*

- a. $5 + 3 = \underline{8}$
- b. $4 + 9 = 10 + \underline{3}$
- c. $7 + 2 = \underline{9}$
- d. $8 + 3 = 10 + \underline{1}$
- e. $7 + 7 = \underline{14}$
- f. $9 + 6 = 10 + \underline{5}$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

11. Add.

(Fluency with numbers to 10 is a goal for students at Level 1. Fluency means that students are able to recall the sums between two numbers quickly and accurately. It also means they are capable of thinking flexibly about the relationships among the parts of numbers to 10.

a. $7 + 1 = 8$

i. $3 + 3 = 6$

b. $2 + 5 = 7$

j. $7 + 2 = 9$

c. $6 + 4 = 10$

k. $6 + 2 = 8$

d. $3 + 5 = 8$

l. $2 + 2 = 4$

e. $4 + 2 = 6$

m. $5 + 1 = 6$

f. $2 + 6 = 8$

n. $3 + 2 = 5$

g. $10 + 0 = 10$

o. $4 + 4 = 8$

h. $9 + 1 = 10$

p. $1 + 3 = 4$

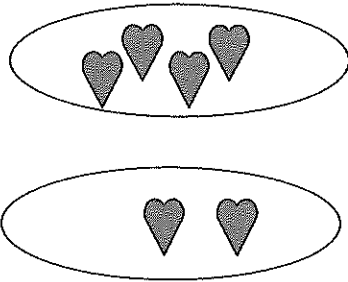
(Having students practice numbers to 10 bond fluency is an easy to do activity with your children. You can use dice, playing cards or other items that have numbers on them. Randomly show two numbers and have your child add them as quickly as possible. Quick and immediate responses is desired so as to develop fluency. However, to build up to this kind of fluency, it is always appropriate to provide concrete materials. Here's an idea to help build bonds:

Give your child a number of pennies (6, 7, 8, 9 or 10). This is your "whole" Have them shake the pennies in their hand then toss onto the floor or table. Write the number of coins that land on heads in one part of the bond and the number that land on tails in the other part. Then say the number sentence. Repeat until all the bonds for that whole have been found, then move to another whole.

Week 1, Lesson 2

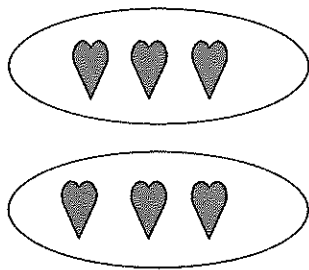
Topic: Missing Part of a Number Bond

1.



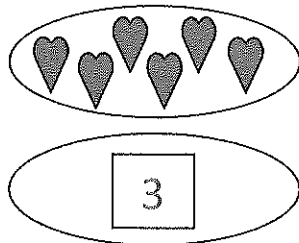
Write a number story for the number of hearts. (A number story should be something that is relevant and easy for the child to come up with. For example, Ms. Ollmann has 4 hearts and Mrs. Arceneaux has 2 hearts. They have 6 hearts altogether.)

2. Write a new number story.

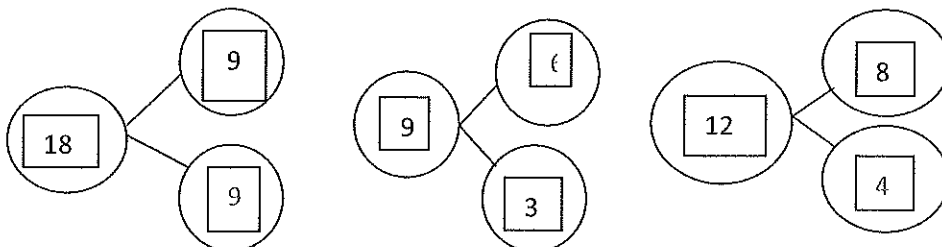


3. How many hearts are needed to make 9?

(This problem reinforces the "Counting On" strategy. Students begin with 6 and count on until they reach 9.)



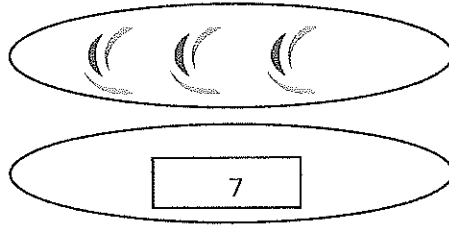
4.



5. Make 10.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

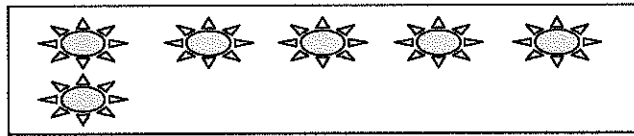
(Here, too, the counting on strategy is appropriate for students. However, some students may have mastered the addition facts for numbers to 10, and therefore, won't need to employ the counting on strategy.)



$$3 + \underline{\quad} 7 \underline{\quad} = 10$$

6. Make 10.

$$6 + \underline{\quad} 4 \underline{\quad} = 10$$



7. Solve the following four problems. (You should notice that the missing number can be on either side of the equal sign. This supports the student's ongoing development of identifying parts and wholes within a number sentence.)

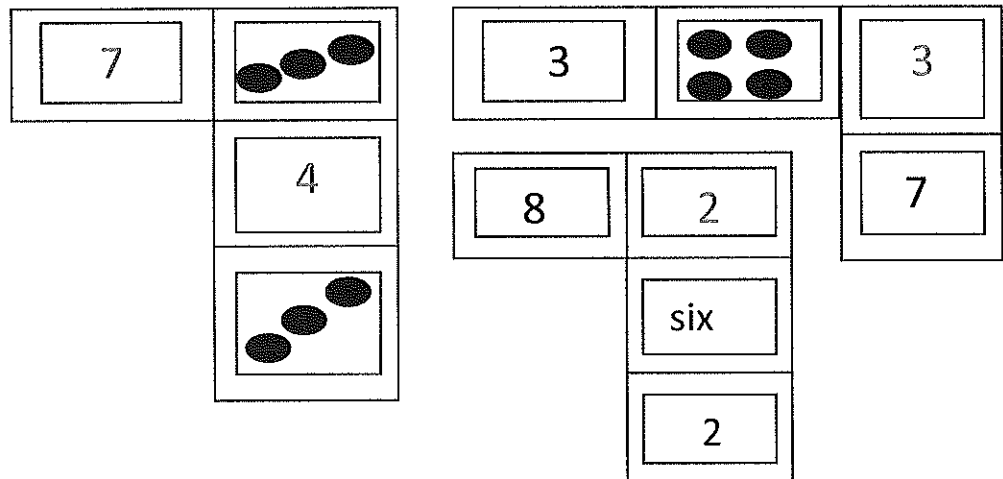
a. $\underline{\quad} 5 \underline{\quad} + 4 = 9$

b. $7 + \underline{\quad} 1 \underline{\quad} = 8$

c. $\underline{\quad} 4 \underline{\quad} + 3 = 7$

d. $6 + 4 = \underline{\quad} 10 \underline{\quad}$

8. Connect the dominoes by making 10. Fill in the blank with the correct number.



Singapore Summer Shape Ups: Level 1 – Thinking Guide

9. Try these.

(In problems such as these, children often forget to identify which number represents a part or a whole. Encourage your child is able to identify whether they are looking for a missing part or a whole.)

a. $8 = \underline{\quad}7\underline{\quad} + 1$

b. $7 = 14 - \underline{\quad}7\underline{\quad}$

c. $6 + \underline{\quad}6\underline{\quad} = 12$

d. $\underline{\quad}7\underline{\quad} - 5 = 2$

10. Write all the number bonds for the following three numbers: If your child needs support, give them the indicated number of counters and allow them to make two parts. This is fun, and it's impossible to make a mistake! 😊 It's also worthwhile to talk with your child about the fact that $5+6$ and $6+5$ are the same. Children also may notice the relationships between the bonds. As one part gets larger the other part gets smaller.

a. 11 0 and 11, 1 and 10, 2 and 9, 3 and 8, 4 and 7, 5 and 6

b. 9 0 and 9; 1 and 8; 2 and 7; 3 and 6; 4 and 5

c. 15 *I think you've got it now!* 😊

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 1, Lesson 3

Topic: Solving Number Stories

Use the following picture to create 3 number stories.



Solve this number story.

A baker baked 2 loaves of bread on Monday morning. Monday afternoon, he baked 3 more loaves. How many loaves did he bake on Monday?

(If necessary, the student can draw pictures or use concrete materials to help them solve the problem.)

$$2+3=5$$

Write two number stories using the above picture. Be sure to solve the problem, too!

Number Story #1 (There are many different stories that can be written. If your child needs a challenge, tell stories where one part is missing. The baker made 12 loaves. He baked 8 in the morning and the rest in the afternoon. How many did he make in the afternoon? This encourages a counting on strategy or even subtraction.)

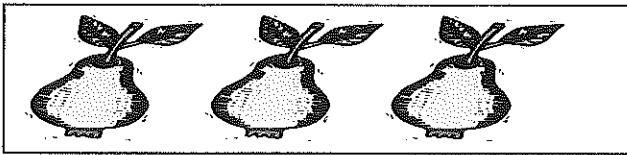
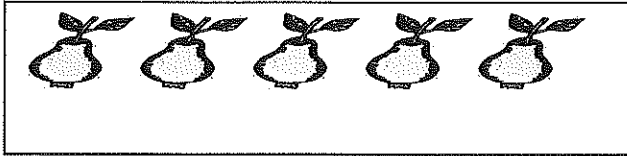
Number Story #2

Singapore Summer Shape Ups: Level 1 – Thinking Guide

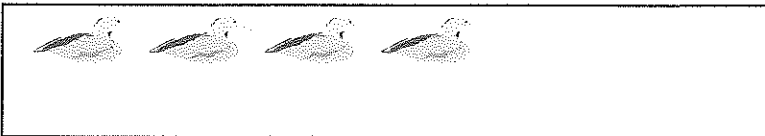
Week 2, Lesson 1

Topic: Addition

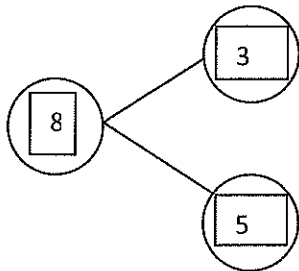
1. Write the addition sentence. $5 + 3 = 8$ or $3 + 5 = 8$



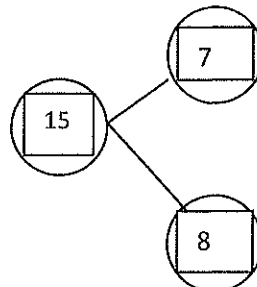
2. Write the addition sentence. $5 + 4 = 9$ or $4 + 5 = 9$



3. Write 2 addition sentences for each number bond.



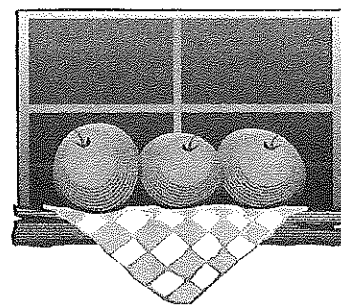
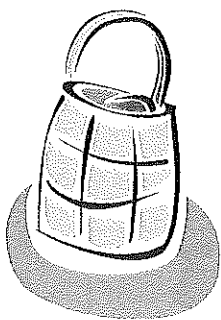
$3 + 5 = 8$ $5 + 3 = 8$



$7 + 8 = 15$ $8 + 7 = 15$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

4.



(This series of problems require the student to identify whether the problem is combining numbers to form a whole or whether the problem begins with the whole and is looking for a missing part. Encourage your child to “count on” to find the missing part.)

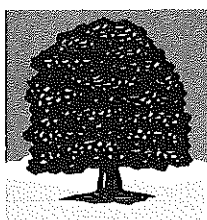
There are 6 oranges in the basket.

How many oranges are there altogether?

$$\boxed{6} \quad \bigcirc \quad \boxed{3} \quad = \quad \boxed{9}$$

There are $\boxed{9}$ oranges altogether.

5.



Two birds are hiding in the tree.

How many birds are there altogether?

$$\boxed{2} \quad \bigcirc \quad \boxed{5} \quad = \quad \boxed{7}$$

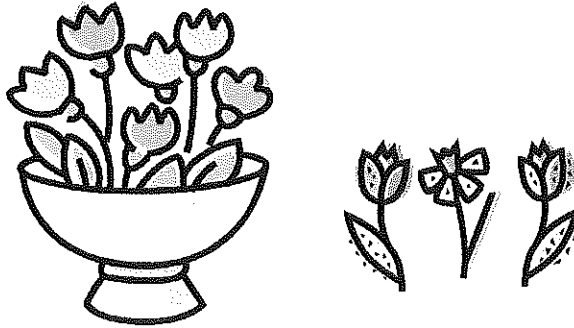
There are $\boxed{7}$ birds altogether.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

6. There are six flowers in the vase.

Add 3 more.

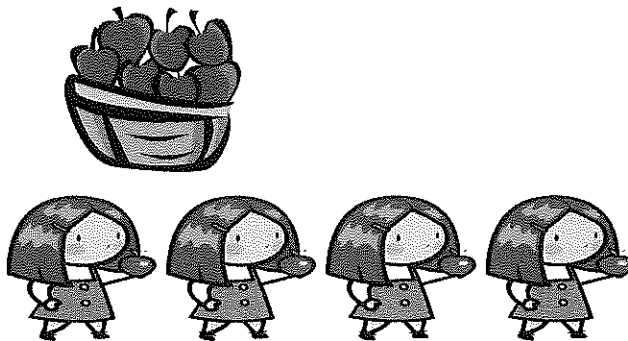
There are 9 flowers altogether.



7. There are 7 apples in the basket.

Add 4 more.

There are 11 apples altogether.

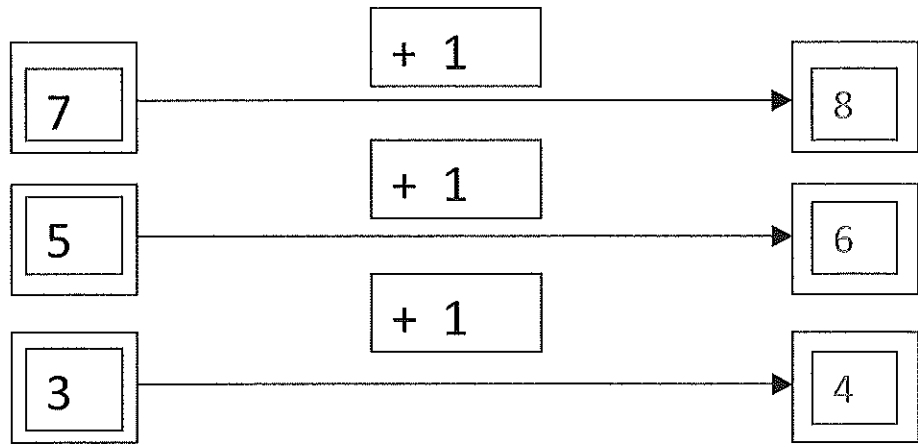


(These types of problems are easy for you and your child to create. Remember, when the problems are relevant to the child, they have a greater investment in solving them accurately.)

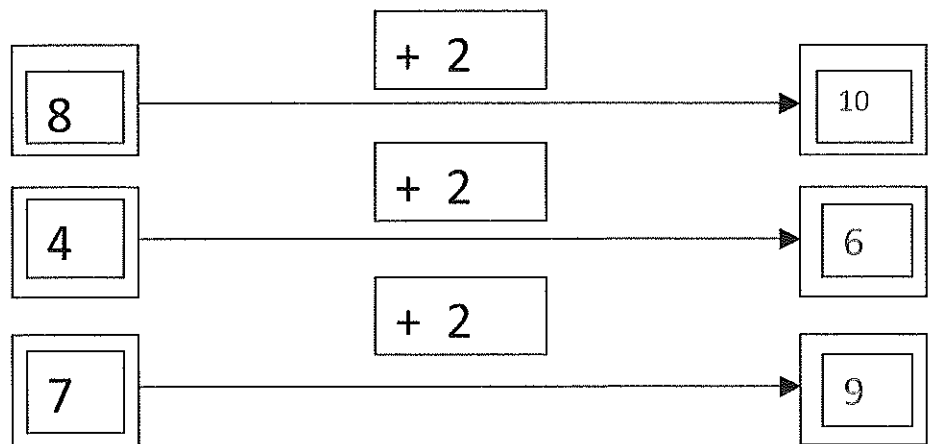
One more, two more and three more relationships are important! Note them often with your child as you go about your day. "We bought 2 apples. How many would we have if we buy 2 more (three more)?"

Singapore Summer Shape Ups: Level 1 – Thinking Guide

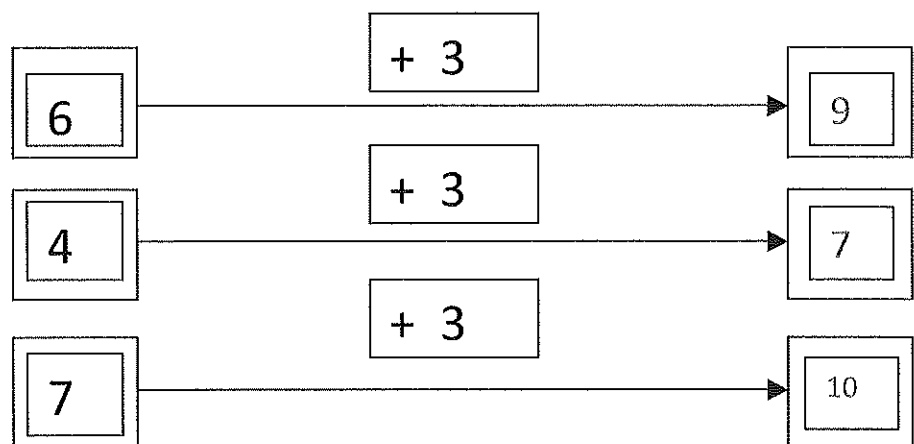
7.



8.



9.



Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 2, Lesson 2

Topic: Addition

1. Use the numbers and signs in each box to write a number sentence.
 (The following problems will help the students learn their addition facts while reinforcing part-part-whole relationships.)

4, 10, 6, =, +

$4 + 6 = 10$ or $6 + 4 = 10$

6, 9, 3, =, +

$6 + 3 = 9$ or $3 + 6 = 9$

5, 8, 3, =, +

$3 + 5 = 8$ or $5 + 3 = 8$

7, 12, 5, =, +

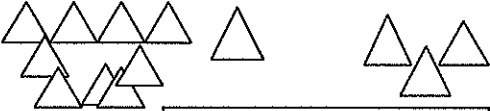
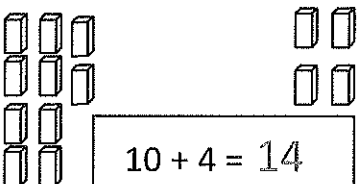
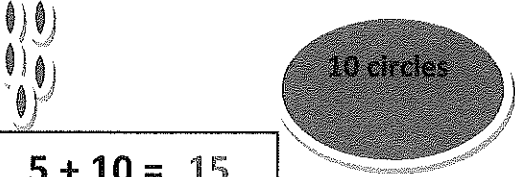

$7 + 5 = 12$ $5 + 7 = 12$

8, 12, 4, =, +

$8 + 4 = 12$ $4 + 8 = 12$

9, 17, 8, =, +

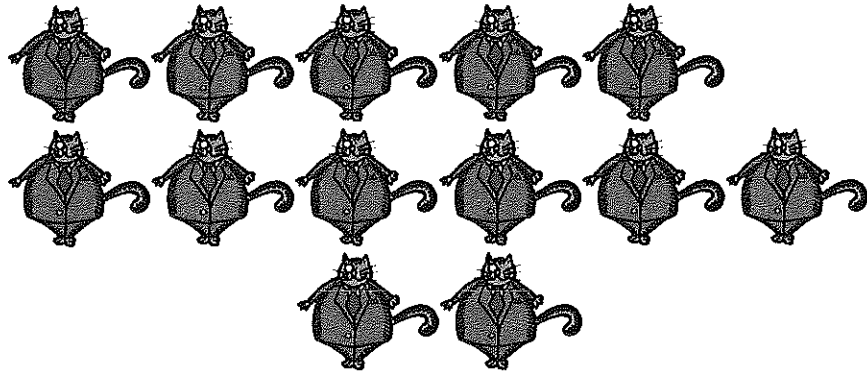
$9 + 8 = 17$ $8 + 9 = 17$

 <p>$10 + 3 = 13$</p>	 <p>$10 + 4 = 14$</p>
 <p>$5 + 10 = 15$</p>	<p>$1 + 10 = 11$</p> 
<p>Draw your own picture adding 10.</p>	<p>Draw another picture adding 10.</p>

Singapore Summer Shape Ups: Level 1 – Thinking Guide

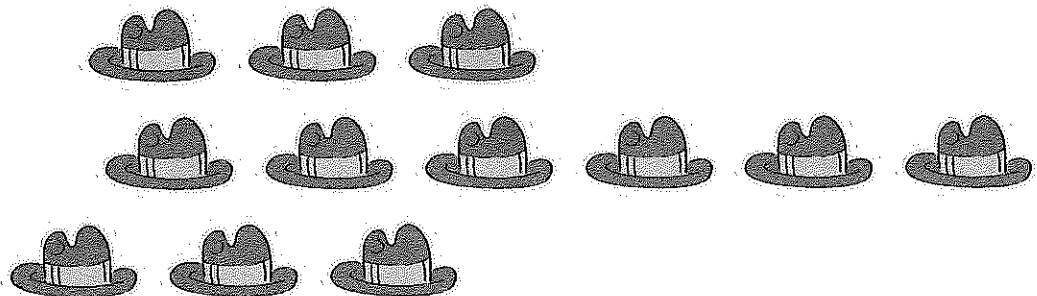
3. Make a ten by drawing a circle around 10 objects. Then add.
(As in past lessons, a student's ability to make ten will help children add numbers easily mentally. Mental math is a key component of the Singapore Math curriculum. This is a pictorial activity. If your child needs the support of concrete materials, don't hesitate!)

a.



$$8 + 5 = 13$$

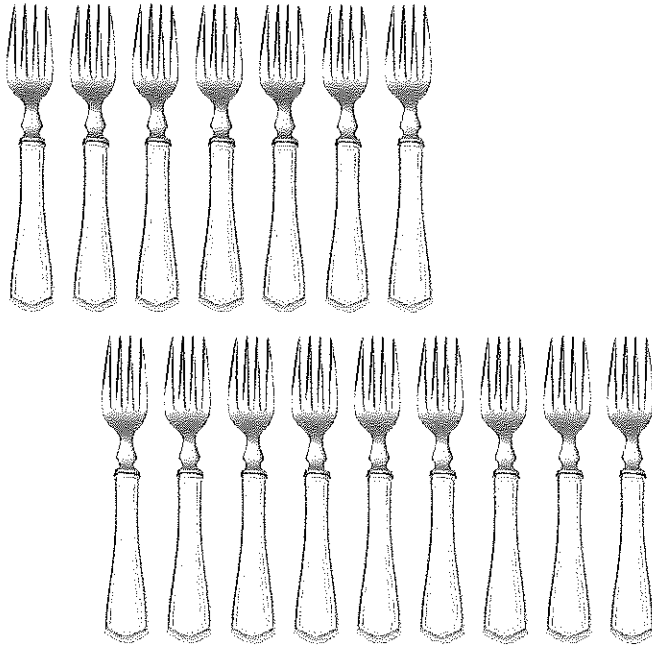
b.



$$3 + 9 = 12$$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

c.



$$7 + 9 = 16$$

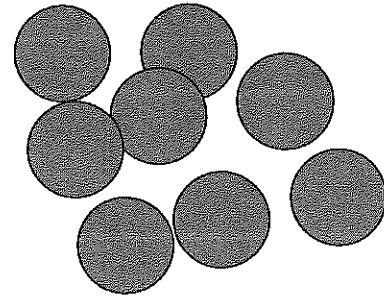
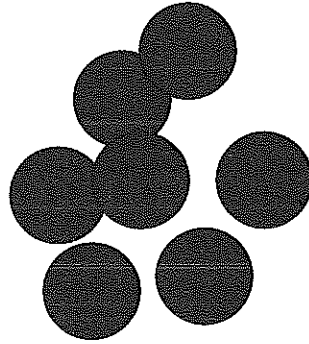
Draw your own picture, make a 10 and then add.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 2, Lesson 3

Topic: Addition

1.



How many balls are there altogether?

Remember....Make 10 first!

$7 + 8 =$

15

There are

15

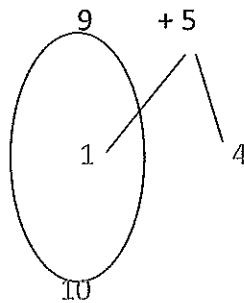
ball altogether.

2 Let's try these mentally. Remember to make a 10!

(The following problems are a different way of helping students visualize making ten. Again, we want the students to be able to manipulate the numbers flexibly and easily. Use the ten frame to help if necessary!)

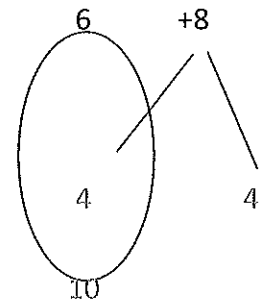
$9 + 5 =$

14



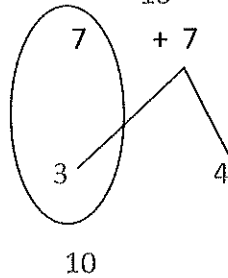
$6 + 8 =$

14



$7 + 7 =$

14



Singapore Summer Shape Ups: Level 1 – Thinking Guide

3. Complete the addition sentences. (Students are now working on numbers to 20.)

$9 + 1 = \underline{10}$

$9 + 7 = \underline{16}$

$8 + 2 = \underline{10}$

$8 + 5 = \underline{13}$

$1 + 9 = \underline{10}$

$4 + 9 = \underline{13}$

$2 + 8 = \underline{10}$

$7 + 8 = \underline{15}$

$3 + 7 = \underline{10}$

$5 + 7 = \underline{12}$

$6 + 4 = \underline{10}$

$6 + 8 = \underline{14}$

$7 + 3 = \underline{10}$

$9 + 3 = \underline{12}$

4. Try these addition sentences.

$6 + 3 = \underline{9}$

$4 + 3 = \underline{7}$

$5 + 4 = \underline{9}$

$16 + 3 = \underline{19}$

$14 + 3 = \underline{17}$

$15 + 4 = \underline{19}$

$6 + 13 = \underline{19}$

$4 + 13 = \underline{17}$

$5 + 14 = \underline{19}$

5. Complete the tables.

Add 2		Add 3		Add 4	
11	13	14	17	16	20
15	17	12	15	11	15
18	20	16	19	13	17
12	14	17	20	10	14
17	19	11	14	15	19
10	12	15	18	12	16
13	15	11	14	14	18

Singapore Summer Shape Ups: Level 1 – Thinking Guide

6. Write “+” or “-” in each circle.

$10 \quad \textcircled{-} \quad 5 = 5$

$10 \quad \textcircled{+} \quad 5 = 15$

$9 \quad \textcircled{+} \quad 8 = 17$

$9 \quad \textcircled{-} \quad 9 = 0$

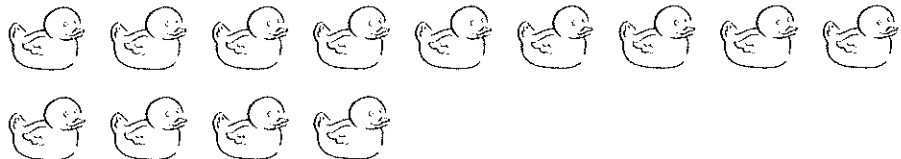
$9 \quad \textcircled{-} \quad 3 = 6$

$7 \quad \textcircled{+} \quad 5 = 12$

$14 \quad \textcircled{-} \quad 8 = 6$

$12 \quad \textcircled{-} \quad 8 = 20$

7. Analise has 13 ducks.



She buys 7 more.



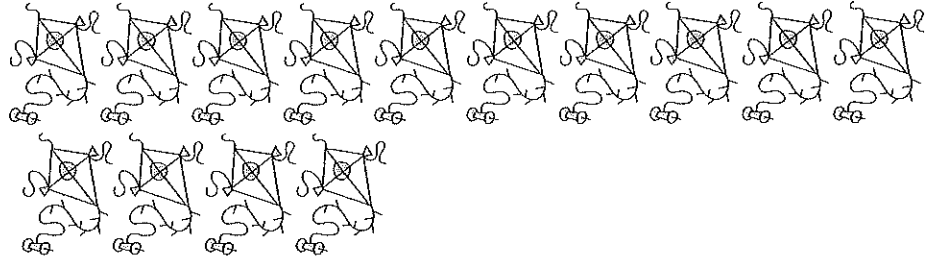
How many ducks does she have now?

$$\boxed{13} + \boxed{7} = \boxed{20}$$

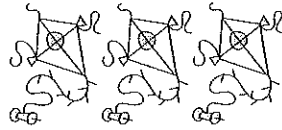
Analise has 20 ducks now.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

8. Daniel has 14 kites.



He finds 3 more kites on the beach.



How many kites does he have now?

$$\boxed{14} + \bigcirc + \boxed{3} = \boxed{17}$$

Daniel has 17 kites.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

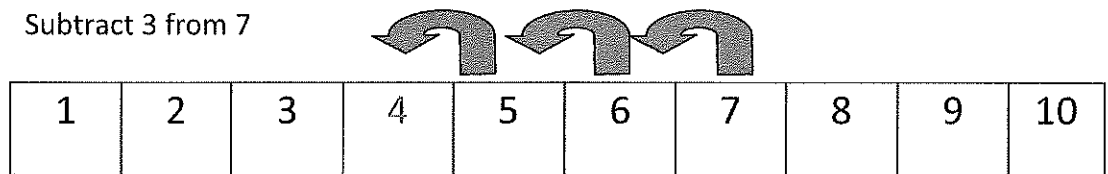
Week 3, Lesson 1

Topic: Subtraction

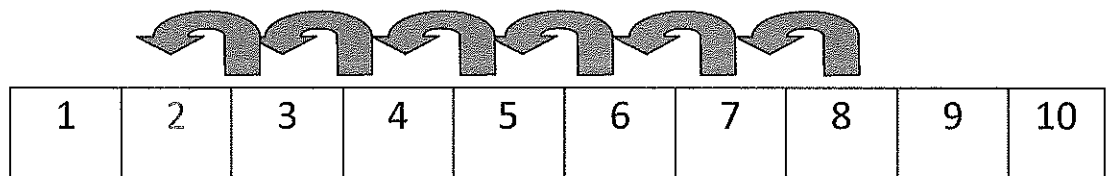
(The number line is a helpful tool as children begin to solidify their understanding of subtraction. As they become more comfortable with counting backwards and with their subtraction facts, the use of the number line will diminish.)

- Using the count backwards strategy, complete the following subtraction sentences.

Subtract 3 from 7



Subtract 6 from 8



Subtract 4 from 9 5

Subtract 3 from 10 7

Subtract 2 from 6 4

Subtract 1 from 5 4

- Complete the subtraction sentences.

$4 - 0 = \underline{4}$

$5 - 1 = \underline{4}$

$7 - 2 = \underline{5}$

$8 - 3 = \underline{5}$

$6 - 0 = \underline{6}$

$7 - 1 = \underline{6}$

$9 - 2 = \underline{7}$

$10 - 3 = \underline{7}$

$8 - 0 = \underline{8}$

$9 - 1 = \underline{8}$

$10 - 2 = \underline{8}$

$9 - 3 = \underline{6}$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

3. Draw a picture to show this number story. Use the space next to the problem.

Thomas had 9 pieces of fruit in a basket.



He ate 3 of them.

How many pieces of fruit did Thomas have left?

Thomas had 6 pieces of fruit left.

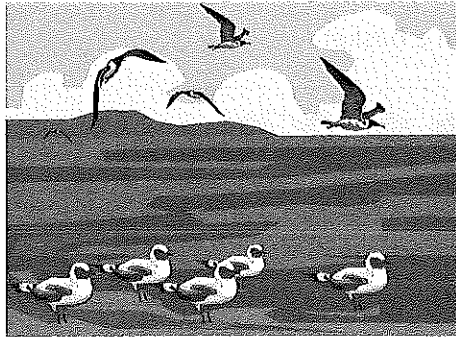
4. Use the picture to make up a story for this number sentence: $7 - 1 = 6$

(Example: There are 7 pieces of fruit. One piece is not in the bowl. How many pieces of fruit are in the bowl? There are 6 pieces of fruit in the bowl.)



Singapore Summer Shape Ups: Level 1 – Thinking Guide

5. Use this picture to write a number story for this number sentence: $10 - 5 = 5$.
(Examples: There are 10 birds. 5 birds are flying. How many birds are on land? There are 5 birds on land.)



(The next series of problems ask students to break the larger number into a 10 and remaining ones. Students should be able to hold the 10, subtract the easier numbers and then determine the answer. This is another strategy that develops competency in manipulating numbers mentally.)

6. We're going to work on some subtraction problems. Here's a reminder for you.

Think:

$$17 - 5$$

$$10 \quad 7 - 5$$

Subtract 5 from 7

$$17 - 5 = 12$$

Try this one:

$$18 - 3$$

$$10 \quad 8 - 5$$

Subtract 5 from 8

$$18 - 3 = 15$$

7. Complete the subtraction sentences. Can you use the strategy in Problem 6 to help you?

$7 - 2 = \underline{\quad 5 \quad}$

$6 - 3 = \underline{\quad 3 \quad}$

$9 - 4 = \underline{\quad 5 \quad}$

$17 - 2 = \underline{\quad 15 \quad}$

$16 - 3 = \underline{\quad 13 \quad}$

$19 - 4 = \underline{\quad 15 \quad}$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

8. Complete the subtraction sentences.

$$11 - 5 = \underline{\quad 6 \quad}$$

$$10 - 4 = \underline{\quad 6 \quad}$$

$$12 - 5 = \underline{\quad 7 \quad}$$

$$11 - 4 = \underline{\quad 7 \quad}$$

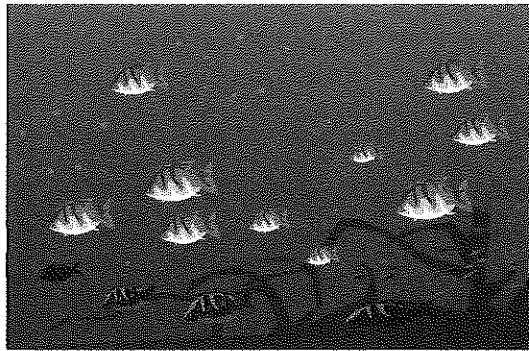
$$13 - 5 = \underline{\quad 8 \quad}$$

$$12 - 4 = \underline{\quad 8 \quad}$$

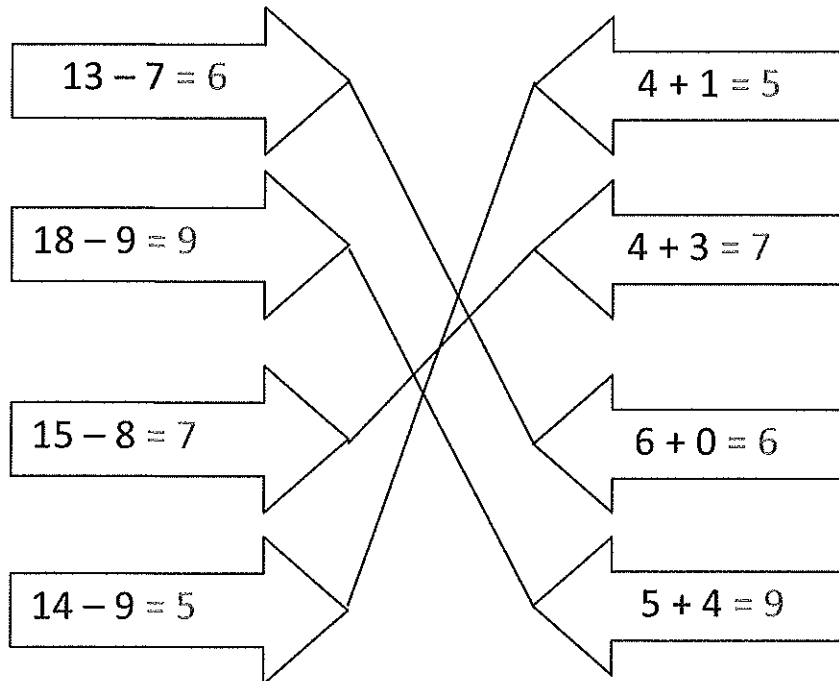
$$18 - 5 = \underline{\quad 13 \quad}$$

$$17 - 4 = \underline{\quad 13 \quad}$$

9. Use the picture to write two subtraction number stories below.
(Answers will vary.)



10. Add or subtract. Then pair the sentences.



Singapore Summer Shape Ups: Level 1 – Thinking Guide

11. Crawford had 17 cookies.

He gave 8 to his brother Lane.

How many cookies did Crawford have left?

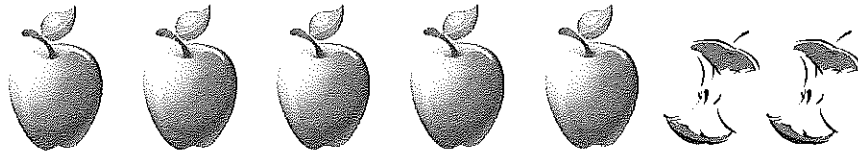
$$\boxed{17} - \bigcirc = \boxed{8} = \boxed{9}$$

Crawford has 9 cookies now.

12. Henry has 8 cats. Thomas has 6 fewer cats than Henry. How many cats does Thomas have?

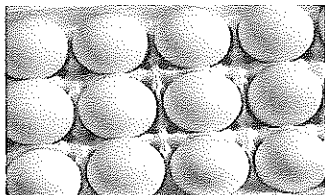
$$\boxed{8} - \bigcirc = \boxed{6} = \boxed{2}$$

13. Fill in the missing numbers.



$$7 - 2 = \boxed{5}$$

14. Fill in the missing numbers.



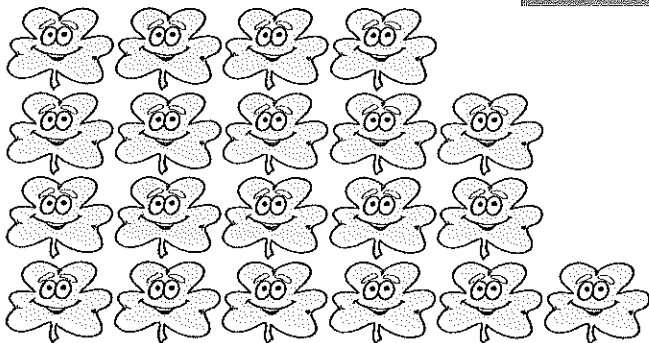
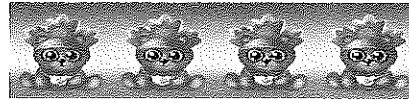
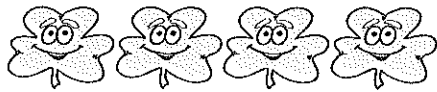
$$12 - \boxed{3} = \boxed{9}$$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

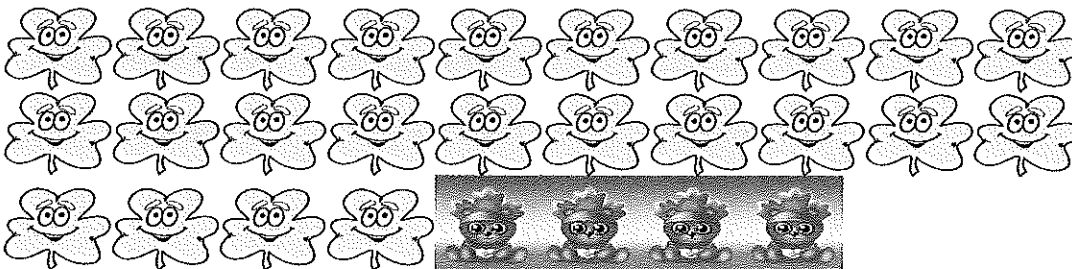
Week 3, Lesson 2

Topic: Addition and Subtraction with 1-digit / 2-digit

Let's review how to add 1-digit and 2-digit numbers. Here we have 24 frogs and 4 teddy bears. The math sentence would be $24 + 4 = ?$



We know it's easier to add when we make 10. So let's arrange the frogs and teddy bears so they are in rows of ten.



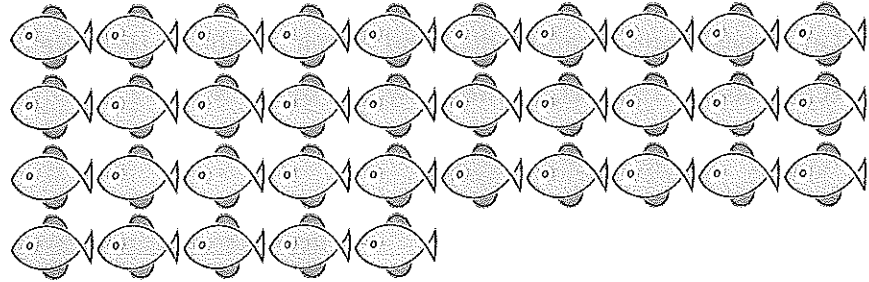
24 is 2 **tens** and 4 **ones**. $24 + 4$ is 2 tens and 4 ones plus 4 ones. So, $24 + 4 = 2$ tens and 8 ones, or 28.

Tens	Ones
2	4
+	4
2	8

Ready to try some? Let's go!

Singapore Summer Shape Ups: Level 1 – Thinking Guide

1. There were 35 fish. 3 octopi joined them. How many fish and octopi were there?



Tens	Ones
3	5
+	3
3	8

There were 38 fish and octopi.

2. . Add.

a. $3 + 5 = \underline{\quad 8 \quad}$

b. $4 + 3 = \underline{\quad 7 \quad}$

c. $6 + 1 = \underline{\quad 7 \quad}$

$23 + 5 = \underline{\quad 28 \quad}$

$44 + 3 = \underline{\quad 47 \quad}$

$66 + 1 = \underline{\quad 67 \quad}$

3. Add.

a. 3 tens + 1 ten = 4 tens

b. 2 tens + 3 tens = 5 tens

c. 7 tens + 2 tens = 9 tens

d. 5 tens + 5 tens = 10 tens

Singapore Summer Shape Ups: Level 1 – Thinking Guide

4. Solve these:

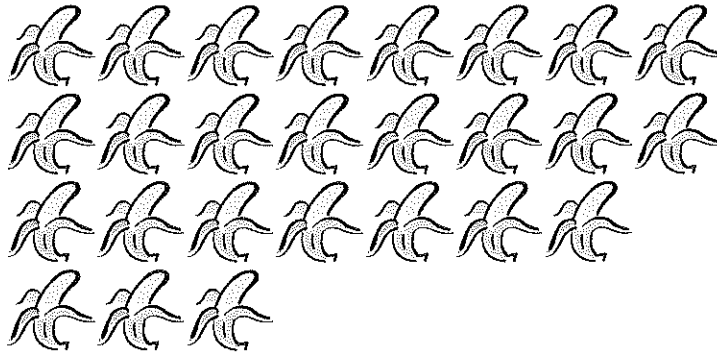
$54 + 5 = \underline{59}$

$72 + 7 = \underline{79}$

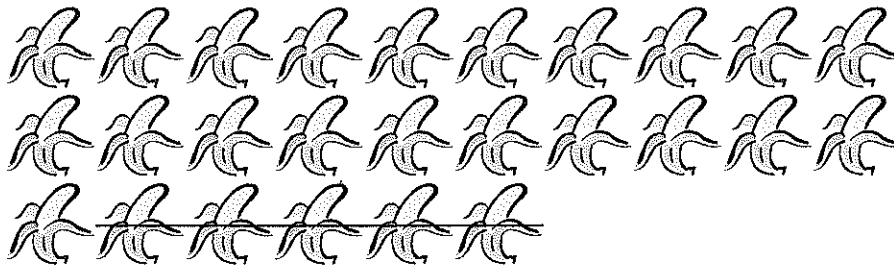
$63 + 4 = \underline{67}$

Let's try some subtraction.

5. Carson bought 26 bananas. He ate 5 of them. How many bananas did Carson have left?



Let's rearrange the bananas and make 10. Then, let's show that Carson ate 5 of the bananas.



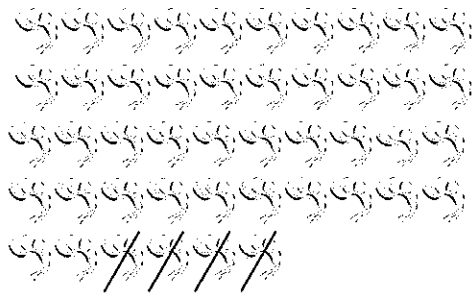
Tens	Ones
2	6
	-
	5

Carson had 21 bananas left.

Now you try these.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

6. Ria caught 46 shrimp.



She ate 4 shrimp.

How many shrimp did Ria have left?

Ria had 42 shrimp left.

7. Crystal purchased 27 books at the book fair.
She donated 6 of them to the library.
How many books did Crystal have left?

Crystal had 21 books left.

8. Subtract.

a. $8 - 2 = \underline{6}$ b. $11 - 3 = \underline{8}$ c. $15 - 6 = \underline{9}$ d. $17 - 9 = \underline{8}$

e. $28 - 2 = \underline{26}$ f. $31 - 3 = \underline{28}$ g. $75 - 6 = \underline{69}$ h. $97 - 9 = \underline{88}$

9. Subtract.

(This series of problems prompts the children to identify that 1 ten has a value of 10. Therefore, 3 tens would have a value of 30. This, too, becomes a helpful strategy when manipulating numbers mentally.)

a. $5 \text{ tens} - 4 \text{ tens} = \underline{1} \text{ tens}$

b. $7 \text{ tens} - 3 \text{ tens} = \underline{4} \text{ tens}$

$50 - 40 = \underline{10}$

$70 - 30 = \underline{40}$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Ready to add/subtract with 10s? Let's go!

10. $26 + 10 = \underline{36}$ $26 - 10 = \underline{16}$
 $53 + 10 = \underline{63}$ $53 - 10 = \underline{43}$
 $67 - 10 = \underline{57}$ $67 + 10 = \underline{77}$
 $83 - 10 = \underline{73}$ $83 + 10 = \underline{93}$

11.

Dryden has 8 coins.

His mom gave him 6 coins.

His dad gave him 5 coins.

(The math sentence for this problem would be $8+6+5$.)

How many coins does Dryden have now?

Dryden has 19 coins.

12.

Abby had 38 hair bows.

She gave Ellie 7 hair bows.

(The math sentence would be $38-7$.)

How many hair bows did Abby have left?

Abby had 31 bows left.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

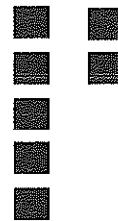
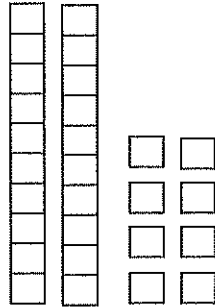
Week 3, Lesson 3

Topic: Make a 10 strategy for Addition and Subtraction

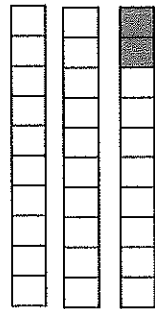
Let's review using the make 10 strategy to add two numbers.

$$20 + 8 \text{ makes } 28$$

$$7$$



Let's solve the addition sentence $28 + 7 = ?$ Because we're working with the Make 10 strategy, we know that if we have 8 ones, we only need 2 more ones to make a 10. Look at this below.



This makes 3 tens and 5 ones.

$$28 + 7 = 30 + 5$$

Because the total number of cubes hasn't changed, the answer of $30 + 5$ is also the answer for $28 + 7$.

$$28 + 7 = 35$$

Ready for another? Here we go....Use the Make a 10 Strategy to solve.

1. $15 + 9 = ?$

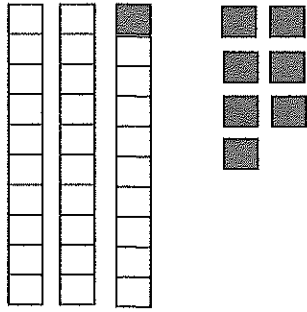


$$15 + 9 = \underline{\quad}20\underline{\quad} + \underline{\quad}4\underline{\quad}$$

$$15 + 9 = \underline{\quad}24\underline{\quad}$$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

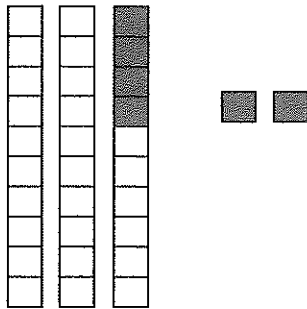
2. $29 + 8 = ?$ Use the Make 10 Strategy to solve this addition sentence.



$$29 + 8 = \underline{30} + \underline{7}$$

$$29 + 8 = \underline{37}$$

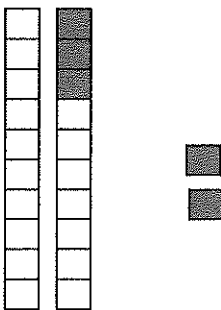
3. $26 + 6 = ?$



$$26 + 6 = \underline{30} + \underline{2}$$

$$26 + 6 = \underline{32}$$

4. $18 + 5 = ?$

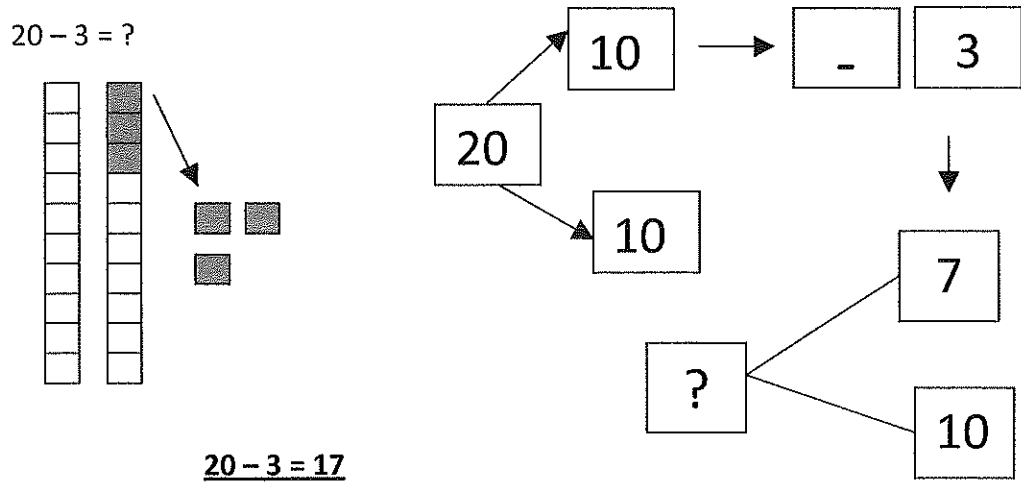


$$18 + 5 = \underline{20} + \underline{3}$$

$$18 + 5 = \underline{23}$$

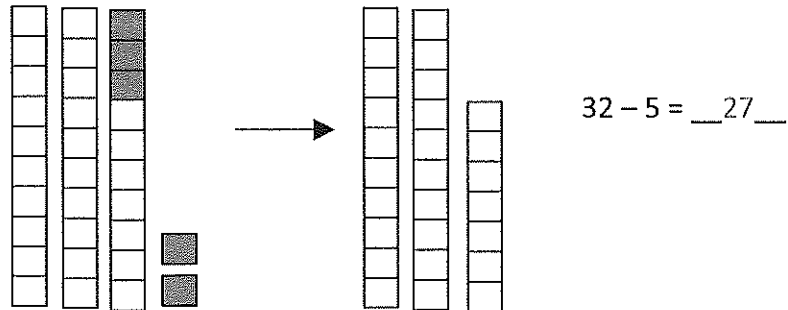
Singapore Summer Shape Ups: Level 1 – Thinking Guide

Now we are going to use the subtract from the 10 Strategy. Let's review.

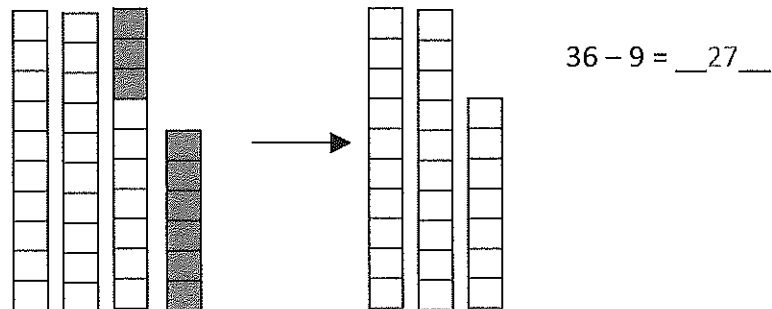


OK. Let's do some problems.

5. $32 - 5 = ?$

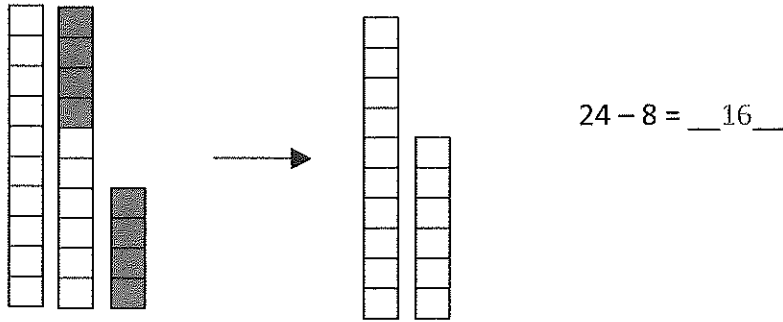


6. $36 - 9 = ?$



Singapore Summer Shape Ups: Level 1 – Thinking Guide

7. $24 - 8 = ?$



(In the following problems, you can use anything that can be grouped into 10. Items such as buttons, macaroni, and bottle caps are a few examples from which to choose.)

8. Madeline picked 37 apples.
She gave 9 of the apples to Kaitlyn.
How many apples did Madeline have left?
 $37 - 9 = 28$

9. Palmer caught 25 fish.
He cooked 6 of them when he got home.
How many fish did Palmer have left?
 $25 - 6 = 19$

10. Matthew got 24 pieces of bubble gum at the store.
He got 7 more pieces from his grandmother.
How many pieces of bubble gum did Matthew have altogether?
 $24 + 7 = 31$

11. Luca had 27 pencils in his pencil bag.
He found 9 pencils in his backpack.
How many pencils did Luca have altogether?
 $27 + 9 = 36$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 4, Lesson 1

Topic: Multiplication – Adding Equal Groups

(The topic of multiplication is introduced to students in Level 1 as repeated addition. The following problems illustrate this concept.)

1. Look at these groups of triangles.



How many triangles are in each group? 3

$$3 \xrightarrow{+ 3} 6 \xrightarrow{+ 3} 9$$

There are 3 triangles in each group.

There are 3 equal groups.

There are 3 threes.

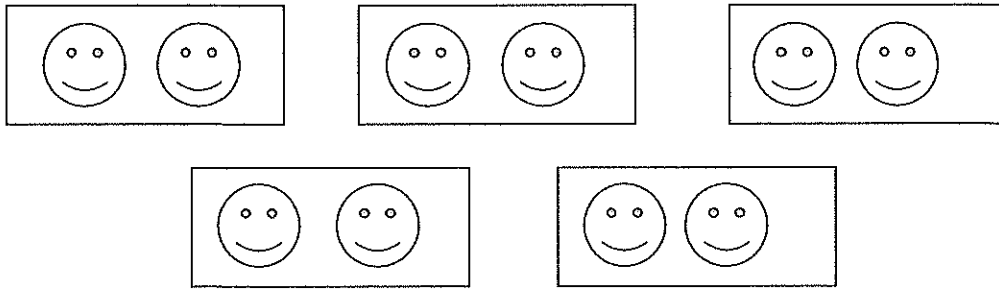
There are 3 groups of 3 .

$3 + 3 + 3 =$ 9 .

There are 9 triangles altogether.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

2.



There are 2 smiley faces in each group.

There are 5 equal groups.

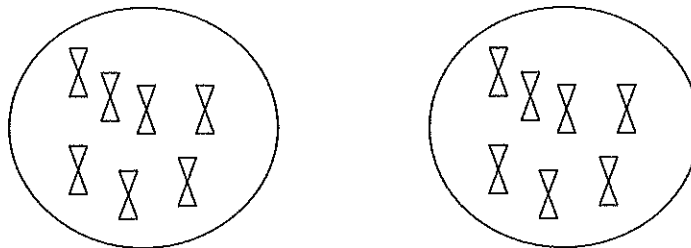
There are 5 2s.

There are 5 groups of 2 .

$$2 + 2 + 2 + 2 + 2 = \underline{\quad 10 \quad}$$

There are 10 smiley faces altogether.

3.



There are 7 groups of hourglasses in each group.

There are 2 equal groups.

There are 2 7s.

There are 2 groups of 7 .

$$7 + 7 = \underline{\quad 14 \quad}$$

There are 14 hourglasses altogether.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Show your work in the space below each problem

(This is another wonderful opportunity to use the concrete-pictorial tools to help your student solidify their understanding of repeated additions.)

4. Grayson had 5 plates of cookies.



There were 4 cookies on each plate.

How many cookies did Grayson have? ($4+4+4+4+4 = ?$)

Grayson had 20 cookies altogether.

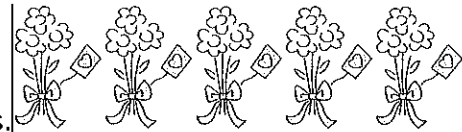
5. Jeffrey collected 6 jars of worms.

There were 5 worms in each jar.

How many worms did Jeffrey have? ($5+5+5+5+5+5=?$)

Jeffrey had 30 worms altogether.

6. Eden picked 5 bouquets of flowers.



There 3 flowers in each bouquet.

How many flowers did Eden pick? ($3+3+3+3+3=?$)

Eden picked 15 flowers altogether.

Now it's time for you to write some multiplication stories.

(You may want to have some items your child can arrange into groups. This will be a concrete way for them to solve the problem. Of course, other students may only need to draw the groups. And, others may only need to manipulate the numbers mentally to solve the question. Whatever your child's stage of development, the emphasis here is on skip counting the equal groups to find the total)

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 4, Lesson 2

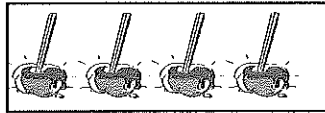
Topic: Understanding the Concept of Multiplication

(This series of lessons help to shift students from concrete/pictorial to pictorial/abstract. They also show both the repeated addition sentence along with the multiplication sentence.)

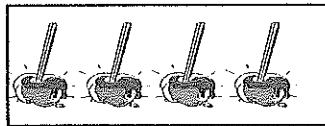
1.



 2 groups of 4 is 8 .



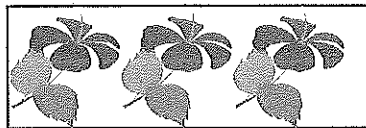
 2 4s is 8 .



 4 + 4 = 8 .

 2 X 4 = 8

2.



 5 groups of 3 is 15 .



 5 3s is 15 .



 3 + 3 + 3 + 3 + 3 = 15



 3 X 5 = 15 .



Singapore Summer Shape Ups: Level 1 – Thinking Guide

3.

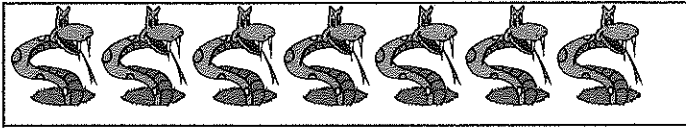


 3 groups of 7 .



 3 7s is 21 .

 7 + 7 + 7 = 21 .



 3 X 7 = 21 .

You will need some macaroni or some buttons to do the next two problems. Be sure to ask mom for help.

4. Write a multiplication story using the numbers 3 and 9.

Example: Mrs. Goodner has 3 bags of Snickers bars. Each bag has 8 bars. How many Snickers bars does Mrs. Goodner have?

5. Write a multiplication story using the numbers 2 and 8.

6. Write a multiplication story using the numbers 5 and 6.

Week 4, Lesson 3

Topic: Multiplication Game and Number Sense

For this lesson, you are going to need a number cube (dice) and mom or dad to play the game with you. But, you will only use numbers 1, 2, 3, and 4. You will also want to have some macaroni or buttons to help you. If you don't have those, you can use a piece of paper and a pencil so that you can draw the groups.

Here are the rules of the game.

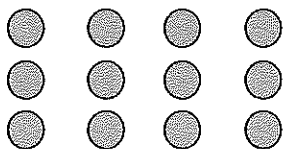
1. The student rolls the cube and says, "Number **IN** a group". You then put that number of macaroni or buttons on the table.

Example: If you roll a 3, you would say, "3 IN a group" and you would put 3 buttons in a column like this....



2. Then mom or dad rolls the cube and says, "The number **OF** groups". They then put the number of columns on the table, each having the same number of buttons as your column.

Example: If your mom/dad rolls a 4, he/she would say, "4 groups" and make 4 columns in total by placing an additional 3 columns.



3. You count the number of pieces and write the multiplication sentence. You would say, "4 groups of 3 makes 12" and you would write $4 \times 3 = 12$.
4. Repeat the same process, but this time mom or dad goes first. Whoever has the larger total in the multiplication sentence is awarded 2 points. If it is a tie, 1 point is awarded to each of you.
5. The team with the largest tally of points at the end is declared the winner.
Have fun!

Singapore Summer Shape Ups: Level 1 – Thinking Guide

6. Fill in the blanks.

(This problem helps students see patterns in numbers. Help your child see that as the numbers move across the chart, they increase by one. As they move down the chart, they increase by 10. Be sure to point out that the 10s place is the only place that changes. The 1s place remains the same.)

21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

7. Write the numbers in order. Begin with the smallest number.

(The ability to order numbers strengthens a child's understanding of place value and number sense, both of which are the foundation of mathematical understanding. Prompt your child to look for place value clues to order numbers.)

41

47

__39__, __41__, __42__, __47__

39

The smallest number is __39__.

42

The greatest number is __47__.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

8. Fill in the missing numbers in the table. Then fill in the blanks on the next page.

51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90

- 1 more than 53 is 54.
- 1 less than 71 is 70.
- 10 more than 66 is 76.
- 10 less than 73 is 63.
- 2 more than 60 is 62.
- 20 less than 89 is 69.

(Continue to develop flexibility with number sense by selecting any number and asking your child to tell you what is 10 more or 10 less.)

Which is the greatest number? Compare by looking at the tens place!

73	
Tens	Ones
7	3

81	
Tens	Ones
8	1

52	
Tens	Ones
5	2

81 is the greatest number because it has 8 tens.
52 is the smallest number because it has 5 tens.

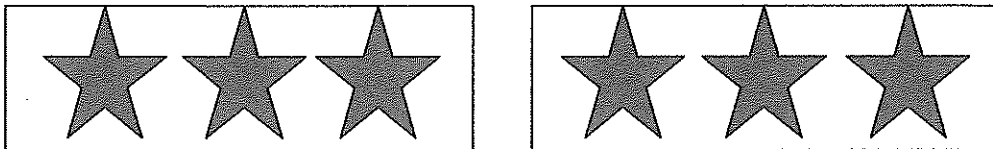
Week 5, Lesson 1

Topic: Sharing Concept of Division

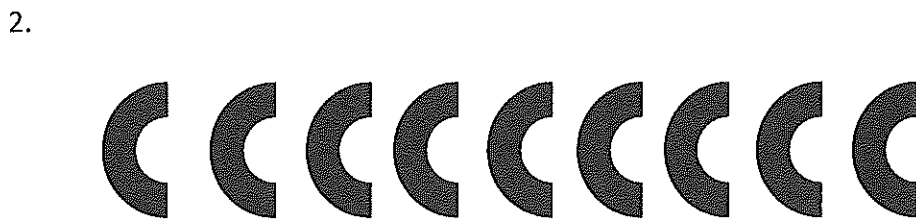
(The concept of division is introduced in Level 1 as sharing – a familiar and easy way to engage in the discovery of division. Our suggestion is that you use commonly found materials in your home to “share”.)



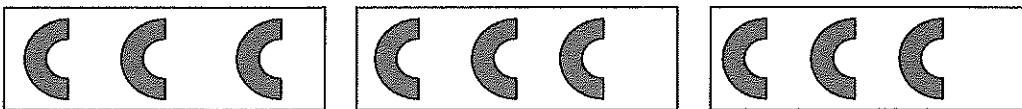
Molly Frances and Ethan need to share the stars equally. In the box below, draw the stars in the boxes so that they are shared equally into two groups – one for Molly Frances and one for Ethan.



6 stars are shared between 2 and each gets 3 stars.



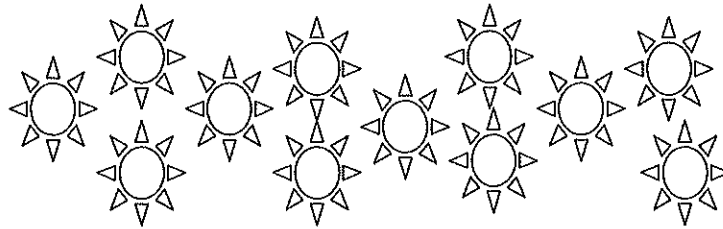
Three students are going to share the arches equally. How many arches will each student receive?



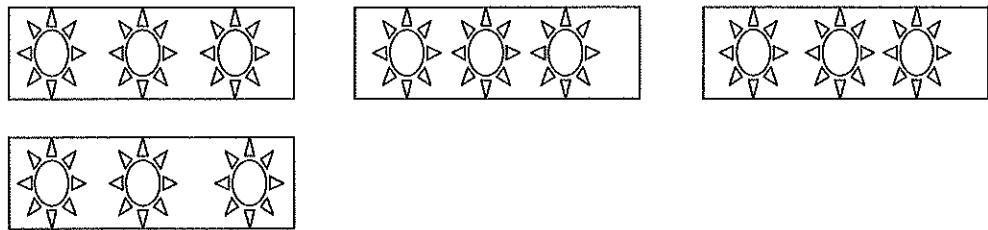
9 arches are shared between 3 and each gets 3 arches.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

3.



Four students have been asked to share the suns equally. How many suns will each student get?



12 suns are shared between 4 students and each student gets 3 suns.

(Just as with multiplication, encourage your child to use something that they can group easily.)

4. 6 students need to share 12 cookies equally. How many cookies will each student get?

5. 7 dogs found 21 bones. How many bones will each dog get?

6. 2 children have 18 Hershey kisses. How many Hershey kisses will each child get?

7. 24 pieces of bubble gum were shared equally between 6 friends. How many pieces of bubble gum did each friend get?

Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 5, Lesson 2

Topic: Grouping Concept of Division

(In this series of problems, students can group the items into equal groups. Extending the idea of sharing into grouping is an important step in helping children move toward the abstract algorithm for division. This algorithm comes later in the Singapore Math program.)

1.

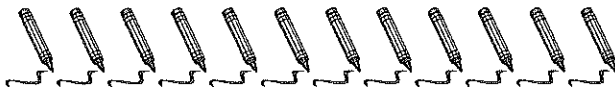


These candles will be sold in packages containing five candles each. How many packages can be made from these candles? 3

(Think: How many candles are in each package? Make a group with 5. Continue to make groups until all the candles are gone.)

 3 packages of candles can be made.

2.



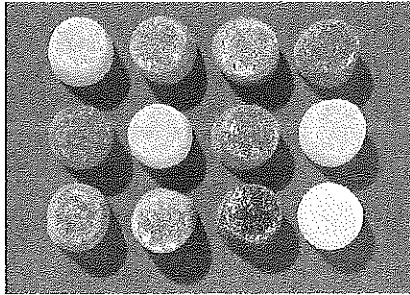
These crayons are to be made into bundles containing 2 crayons each. How many bundles of crayons will be made from these crayons?

 6 bundles of crayons will be made.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

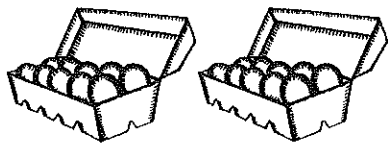
3. Shuhei and Maggie were asked to share 12 pieces of candy equally. How many pieces of candy did each get?

(Think: Ask your child how many pieces of candy do he/she need to draw? Then, how can they group the candy into equally groups. Remember, they can use objects to determine their answer, and then draw their solution.)



Shuhei and Maggie got 6 pieces of candy.

4. Noah had 24 hard boiled eggs. He wanted to share them equally with Emily and Christopher. How many hard boiled eggs did Noah, Emily and Christopher get?



Noah, Emily and Christopher got 8 hard boiled eggs.

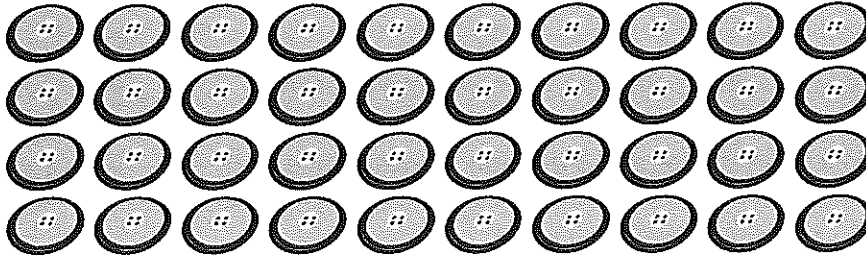
5. Divide the forks into groups of 5. How many groups of forks are there?



There are 6 groups of 5 forks.

Singapore Summer Shape Ups: Level 1 – Thinking Guide

6.



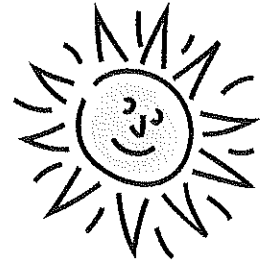
There are 40 buttons. Maria uses 5 buttons on one jacket.

Maria makes 8 jackets.

Week 5, Lesson 3

Topic: Writing Number Stories

This lesson is about creating your own multiplication and division number stories. You will need to create 3 multiplication stories and 3 division stories. Have fun!



1. Multiplication Story #1

2. Multiplication Story #2

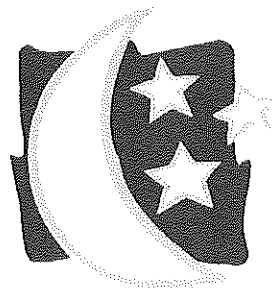
3. Multiplication Story #3

Singapore Summer Shape Ups: Level 1 – Thinking Guide

4. Division Story #1

5. Division Story #2

6. Division Story #3



Singapore Summer Shape Ups: Level 1 – Thinking Guide

Week 6, Lesson 1

Topic: Counting by Tens/Identifying Tens and Ones

(Counting by 10s is skill that begins to develop in Level 1. Some students still may need to group items into rows of 10s to help them discover a solution.)

1. Count by tens.

$1 \text{ ten} = \underline{\quad 10 \quad}$

$5 \text{ tens} = \underline{\quad 50 \quad}$

$9 \text{ tens} = \underline{\quad 90 \quad}$

$2 \text{ tens} = \underline{\quad 20 \quad}$

$6 \text{ tens} = \underline{\quad 60 \quad}$

$10 \text{ tens} = \underline{\quad 100 \quad}$

$3 \text{ tens} = \underline{\quad 30 \quad}$

$7 \text{ tens} = \underline{\quad 70 \quad}$

$4 \text{ tens} = \underline{\quad 40 \quad}$

$8 \text{ tens} = \underline{\quad 80 \quad}$

2. Identify the tens and the ones.

$37 = \underline{\quad 3 \quad} \text{ tens and } \underline{\quad 7 \quad} \text{ ones}$

$77 = \underline{\quad 7 \quad} \text{ tens and } \underline{\quad 7 \quad} \text{ ones}$

$86 = \underline{\quad 8 \quad} \text{ tens and } \underline{\quad 6 \quad} \text{ ones}$

$59 = \underline{\quad 5 \quad} \text{ tens and } \underline{\quad 9 \quad} \text{ ones}$

$91 = \underline{\quad 9 \quad} \text{ tens and } \underline{\quad 1 \quad} \text{ ones}$

$26 = \underline{\quad 2 \quad} \text{ tens and } \underline{\quad 6 \quad} \text{ ones}$

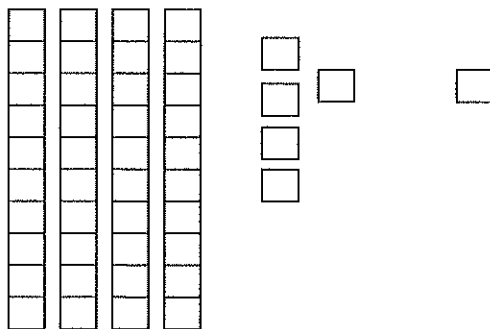
$6 = \underline{\quad 0 \quad} \text{ tens and } \underline{\quad 6 \quad} \text{ ones}$

$99 = \underline{\quad 9 \quad} \text{ tens and } \underline{\quad 9 \quad} \text{ ones}$

$40 = \underline{\quad 4 \quad} \text{ tens and } \underline{\quad 0 \quad} \text{ ones}$

$14 = \underline{\quad 1 \quad} \text{ tens and } \underline{\quad 4 \quad} \text{ ones}$

3. Can you figure out one more and one less: ones and tens? Let's give it a try.



How many tens? 4

How many ones? 5

Add one more: $45 + 1 = 46$

Singapore Summer Shape Ups: Level 1 – Thinking Guide

4. Add one more.

$57 + 1 = \underline{\quad 58 \quad}$

$76 + 1 = \underline{\quad 77 \quad}$

$78 + 1 = \underline{\quad 79 \quad}$

$17 + 1 = \underline{\quad 18 \quad}$

$49 + 1 = \underline{\quad 50 \quad}$

$99 + 1 = \underline{\quad 100 \quad}$



5. Subtract one.

$43 - 1 = \underline{\quad 42 \quad}$

$79 - 1 = \underline{\quad 78 \quad}$

$21 - 1 = \underline{\quad 20 \quad}$

$55 - 1 = \underline{\quad 54 \quad}$

$30 - 1 = \underline{\quad 29 \quad}$

$62 - 1 = \underline{\quad 61 \quad}$

Week 6, Lesson 2

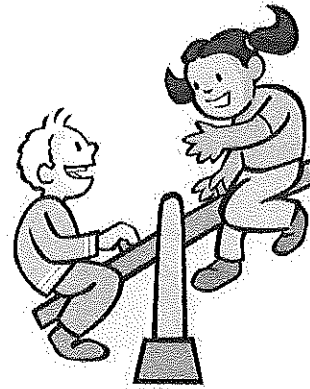
Topic: Comparing and ordering numbers

1. Which is greater?

7 3

4 9

5 6



2. Now which is greater?

30 70

50 20

70 60

80 90

3. What about these? Which is smaller?

23 27

68 62

45 44

87 85

4. Now these. Which is smaller?

46 16

38 68

97 47

22 32

54 44

Singapore Summer Shape Ups: Level 1 – Thinking Guide

5. Keep going. Which is greater?

63 57

49 52

28 17

97 98

11 (10)

6. Put these numbers in order from smallest to greatest.

51, 14, 28, 65 14 , 28 , 51 , 65

78, 90, 77, 64 64 , 77 , 78 , 90

34, 94, 17, 18 17 , 18 , 34 , 94

41, 88, 3, 15 3 , 15 , 41 , 88

7. Ask mom to pick a number between 1 and 100. Count forward by 1s.

Have her pick another number. Count backward by 1s.

8. Now ask mom to pick another number between 1 and 100. Count forward by 10s.

Pick another number. Count backward by 10s.

Week 6, Lesson 3

Topic: More Counting and Comparing

1. Count forward by 2's.
What is the missing number?

12 14 16 18

2. Fill in the blanks.

 10 and 9 is 19.

 16 is the same as $10 + 6$.

15 is the same as 14 + 1 . (There are various answers.)

10 and 4 is 14.

3. Count backwards by 2's.
What is the missing number?

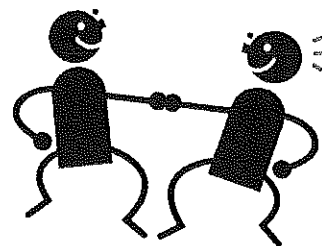
28 26 24 22

4. Count by 2's from 36.

36 38 40 42 44 46

5. Count backwards by 2's from 30.

30 28 26 24 22
 20



Singapore Summer Shape Ups: Level 1 – Thinking Guide

6. There are 14 flowers in a vase. Add 4 more.
How many flowers are there altogether?

There are 18 flowers altogether.

7. Complete the number grid.

31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Congratulations! You've finished the Summer Shape Up for Level 1! Now you're ready to move ahead to Level 2 when school resumes in August!

