

# Lesson Plan

## ADDITION AND SUBTRACTION

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### Summary

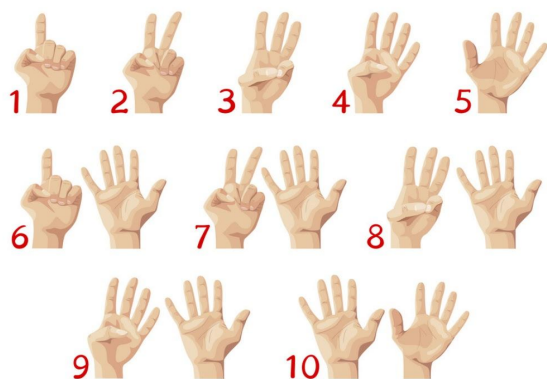
1. Subject(s): MATHEMATICS
2. Topic or Unit of Study: ADDITION AND SUBTRACTION
3. Grade/Level: 1 (class 2 and 3)
4. Objective:
  - a. Basic intro; how to add numbers using fingers (if up to 10)
  - b. Addition without carrying over; subtraction without lending
  - c. Concept of carry over; concept of lending
  - d. Level wise questions with increasing no. of digits
  - e. Word problems

**What the child should know before: Numbers, Number line, place value.**

### Implementation

Addition and subtraction form the very foundation for mathematics and numeracy, and so children need to have a lot of practice and a clear understanding on these topics. Both are widely used in everyday life, so taking day-to-day examples will help kids understand and apply concepts better.

### Fun Activity



Teach basic counting using fingers by asking students to spread out both their hands and then one by one count numbers on their fingers.

Try different combinations using both hands and then count them all together to find the answer for addition.

## Addition and Subtraction

Make students understand that addition is basically to count in the forward direction while subtraction is to count in the backward direction.

### Some examples of questions:

- Add on Fingers:

$$1 + 3 =$$

$$2 + 2 =$$

$$3 + 2 =$$

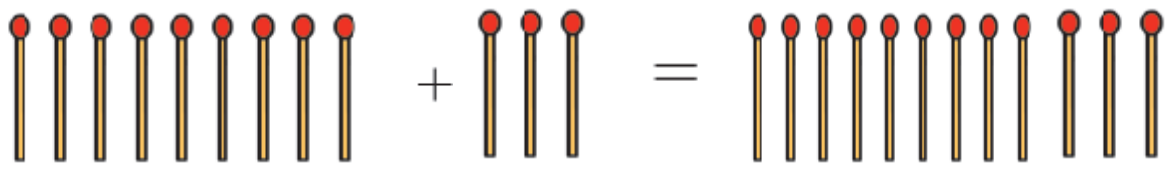
- Subtract on Fingers:

$$5 - 3 =$$

$$8 - 5 =$$

$$4 - 4 =$$

## Activity



To find total sticks -

- First count total sticks from 0 (Total is 12) OR
- Just count 3 extra sticks from 9 onwards ( 10, 11, 12)

Make them understand that it's the same thing. But counting just the extra steps is faster.

- **Add/Subtract and mark the sum on number line**

Take a number line and give the kids any two numbers to add. The procedure would be to find out and point to the first number on the number line and then move the required number of steps to reach the destination



Similarly, can be done for subtraction.

❖ **Important Point : Give kids an insight about the commutative nature of Addition**

**How Rama counted**



2 fingers + 5 fingers



**How Yash counted**

5 fingers + 2 fingers



**Note: This exercise can be also done using number line by swapping the order of the numbers and show that the sum is still the same (i.e., 2 steps from 7 OR 7 steps from 2 would both reach out to 9 as total on the number line)**


## **Addition without carryover**


Teachers can bring different things, buttons or stationary, etc. Distribute the stationary among the kids and then ask them to add or subtract in some manner or give-take from someone else. Concept of addition and subtraction can also be taught in a similar way.


We can use image worksheets like these. This will also help in improving basic counting skills for the students

Addition - Count the objects, write the numbers and find the sum (1-10)


 $\square + \square = \square$


 $\square + \square = \square$


 $\square + \square = \square$


 $\square + \square = \square$


 $\square + \square = \square$

www.megaworkbook.com




### Adding using pictures

Kindergarten Addition Worksheet

Count the circles. Write the numbers. Find the sum.


 $+$ 

 $\square + \square = \square$


 $+$ 

 $\square + \square = \square$


 $+$ 

 $\square + \square = \square$


 $+$ 

 $\square + \square = \square$


 $+$ 

 $\square + \square = \square$

# SINGLE DIGIT ADDITION

Name : \_\_\_\_\_ Score : \_\_\_\_\_

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

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$$\begin{array}{r} 6 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 5 \\ \hline \end{array}$$


$$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$$



## DOUBLE DIGIT ADDITION WITHOUT CARRYING OVER

- Addition of two numbers

 Double Digit Addition	NAME: _____	
$\begin{array}{r} 22 \\ + 16 \\ \hline \end{array}$	$\begin{array}{r} 52 \\ + 24 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ + 11 \\ \hline \end{array}$
$\begin{array}{r} 77 \\ + 22 \\ \hline \end{array}$	$\begin{array}{r} 34 \\ + 65 \\ \hline \end{array}$	$\begin{array}{r} 52 \\ + 34 \\ \hline \end{array}$
$\begin{array}{r} 16 \\ + 23 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ + 16 \\ \hline \end{array}$	$\begin{array}{r} 61 \\ + 21 \\ \hline \end{array}$
$\begin{array}{r} 62 \\ + 30 \\ \hline \end{array}$	$\begin{array}{r} 75 \\ + 12 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ + 67 \\ \hline \end{array}$

- Addition of three numbers

Name : \_\_\_\_\_ Score : \_\_\_\_\_

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

$$\begin{array}{r} 10 \\ 35 \\ 10 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 11 \\ 24 \\ + 13 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ 22 \\ 15 \\ + 21 \\ \hline \end{array}$$

$$\begin{array}{r} 27 \\ 21 \\ 10 \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ 32 \\ 10 \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ 22 \\ 12 \\ + 24 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ 22 \\ + 26 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 13 \\ 10 \\ + 36 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ 21 \\ 10 \\ + 18 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 17 \\ 11 \\ + 31 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ 12 \\ 11 \\ + 34 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ 21 \\ 10 \\ + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 33 \\ 12 \\ + 14 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ 10 \\ 10 \\ + 17 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ 16 \\ 20 \\ + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 31 \\ 13 \\ + 12 \\ \hline \end{array}$$



- Addition of three digit numbers

## Triple Digit Addition Practice

$$\begin{array}{r} 114 \\ + 575 \\ \hline 9 \end{array}$$

First, add the ones.

$$\begin{array}{r} 114 \\ + 575 \\ \hline 89 \end{array}$$

Second, add the tens.

$$\begin{array}{r} 114 \\ + 575 \\ \hline 689 \end{array}$$

Third, add the hundreds.

Add the following problems.

$$\begin{array}{r} 148 \\ + 730 \\ \hline \end{array}$$

$$\begin{array}{r} 645 \\ + 352 \\ \hline \end{array}$$

$$\begin{array}{r} 503 \\ + 125 \\ \hline \end{array}$$

$$\begin{array}{r} 315 \\ + 263 \\ \hline \end{array}$$

$$\begin{array}{r} 543 \\ + 433 \\ \hline \end{array}$$

$$\begin{array}{r} 751 \\ + 212 \\ \hline \end{array}$$

$$\begin{array}{r} 232 \\ + 555 \\ \hline \end{array}$$

$$\begin{array}{r} 504 \\ + 334 \\ \hline \end{array}$$

$$\begin{array}{r} 211 \\ + 258 \\ \hline \end{array}$$

$$\begin{array}{r} 123 \\ + 554 \\ \hline \end{array}$$

$$\begin{array}{r} 456 \\ + 320 \\ \hline \end{array}$$

$$\begin{array}{r} 356 \\ + 130 \\ \hline \end{array}$$

$$\begin{array}{r} 621 \\ + 122 \\ \hline \end{array}$$

$$\begin{array}{r} 180 \\ + 813 \\ \hline \end{array}$$

$$\begin{array}{r} 621 \\ + 127 \\ \hline \end{array}$$

$$\begin{array}{r} 312 \\ + 447 \\ \hline \end{array}$$

$$\begin{array}{r} 111 \\ + 353 \\ \hline \end{array}$$

$$\begin{array}{r} 145 \\ + 533 \\ \hline \end{array}$$

$$\begin{array}{r} 456 \\ + 113 \\ \hline \end{array}$$

$$\begin{array}{r} 371 \\ + 404 \\ \hline \end{array}$$

$$\begin{array}{r} 154 \\ + 435 \\ \hline \end{array}$$

$$\begin{array}{r} 313 \\ + 475 \\ \hline \end{array}$$

$$\begin{array}{r} 243 \\ + 212 \\ \hline \end{array}$$

$$\begin{array}{r} 750 \\ + 123 \\ \hline \end{array}$$

$$\begin{array}{r} 613 \\ + 373 \\ \hline \end{array}$$

$$\begin{array}{r} 450 \\ + 129 \\ \hline \end{array}$$

$$\begin{array}{r} 201 \\ + 186 \\ \hline \end{array}$$

$$\begin{array}{r} 193 \\ + 505 \\ \hline \end{array}$$

$$\begin{array}{r} 775 \\ + 121 \\ \hline \end{array}$$

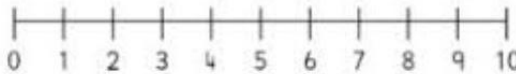
$$\begin{array}{r} 128 \\ + 371 \\ \hline \end{array}$$

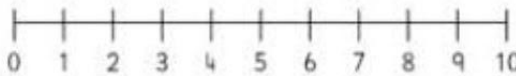
# SUBTRACTION WITHOUT LENDING

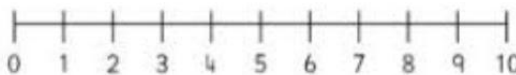
Subtraction can be taught using the number scale. We can initially draw vertical lines equal to the larger number and then strike out the number of lines equal to smaller number from it.


## ☆☆ Number Line Subtraction ☆☆

Finish the number sentences. Use the number lines to help.

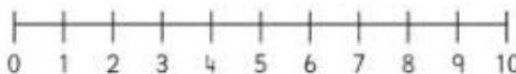
$$8 - 1 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

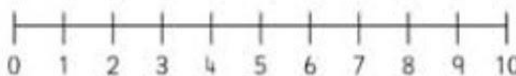
$$6 - 3 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

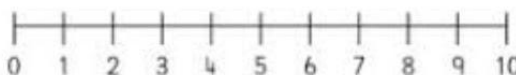
$$9 - 7 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.


$$10 - 6 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

$$5 - 2 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

$$9 - 4 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

$$4 - 2 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

$$8 - 7 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

$$10 - 3 = \square$$
A horizontal number line with tick marks labeled from 0 to 10.

- ❖ Another activity for learning addition/subtraction could be by asking the kids to walk forwards when you say 'add' a number of steps and walk backwards when you say 'subtract' a number.

## Single Digit Subtraction

Subtraction (A)
-----------------

Find each difference.

$$\begin{array}{r} 7 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$$

## Double Digit Subtraction (Without Borrow)

Skill – Subtraction

Name: \_\_\_\_\_

### Double Digit Subtraction

1.

$$\begin{array}{r} 63 \\ - 20 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 69 \\ - 31 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 72 \\ - 62 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 57 \\ - 34 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 94 \\ - 51 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 27 \\ - 15 \\ \hline \end{array}$$

7.

$$\begin{array}{r} 94 \\ - 81 \\ \hline \end{array}$$

8.

$$\begin{array}{r} 89 \\ - 53 \\ \hline \end{array}$$

9.

$$\begin{array}{r} 99 \\ - 93 \\ \hline \end{array}$$

10.

$$\begin{array}{r} 66 \\ - 23 \\ \hline \end{array}$$

11.

$$\begin{array}{r} 38 \\ - 31 \\ \hline \end{array}$$

12.

$$\begin{array}{r} 70 \\ - 60 \\ \hline \end{array}$$

13.

$$\begin{array}{r} 51 \\ - 51 \\ \hline \end{array}$$

14.

$$\begin{array}{r} 95 \\ - 84 \\ \hline \end{array}$$

15.

$$\begin{array}{r} 87 \\ - 50 \\ \hline \end{array}$$



## Place value (Ones and Tens place)

Before understanding addition and subtraction with carrying over and lending over, it is very important for the students to understand place value. Here are a few examples to refresh their concept.

<p>1 tens + 4 ones</p> <p>_____ + _____</p> <p>total <input type="text"/></p>	<p>3 tens + 8 ones</p> <p>_____ + _____</p> <p>total <input type="text"/></p>
<p>2 tens + 7 ones</p> <p>_____ + _____</p> <p>total <input type="text"/></p>	<p>1 tens + 9 ones</p> <p>_____ + _____</p> <p>total <input type="text"/></p>
<p>4 tens + 2 ones</p> <p>_____ + _____</p> <p>total <input type="text"/></p>	<p>5 tens + 3 ones</p> <p>_____ + _____</p> <p>total <input type="text"/></p>

Fill in the correct tens and ones for the given numbers.

$$\square \text{ tens and } \square \text{ ones} = 37$$

$$\square \text{ tens and } \square \text{ ones} = 43$$

$$\square \text{ tens and } \square \text{ ones} = 81$$

$$\square \text{ tens and } \square \text{ ones} = 72$$

$$\square \text{ tens and } \square \text{ ones} = 44$$

$$\square \text{ tens and } \square \text{ ones} = 56$$

$$\square \text{ tens and } \square \text{ ones} = 87$$

$$\square \text{ tens and } \square \text{ ones} = 10$$

$$\square \text{ tens and } \square \text{ ones} = 24$$

# ADDITION WITH CARRYING OVER

Now that their understanding of tens' and ones' place is clear, we can move forward to addition with carrying over. Just introduce them to the concept of carry-over.

		1	
	4	5	
+	2	6	
		11	

We have to explain to the students that there can be only one digit in the ones' place or the tens' place. Hence we need to **"carry"** the extra digit forward to the adjacent place and then add it to the adjacent place value

Also, we need to make kids understand that the process of adding numbers starts from the ones' place.

- Try and solve these problems now!

Name \_\_\_\_\_  
Date \_\_\_\_\_

Sum of two 2-digit numbers  
with carry

85 +37 _____ _____	58 +33 _____ _____	57 +36 _____ _____	35 +55 _____ _____
54 +55 _____ _____	53 +55 _____ _____	55 +95 _____ _____	24 +49 _____ _____
37 +87 _____ _____	47 +25 _____ _____	54 +56 _____ _____	95 +65 _____ _____
70 +90 _____ _____	37 +58 _____ _____	55 +37 _____ _____	55 +81 _____ _____
84 +48 _____ _____	44 +27 _____ _____	70 +30 _____ _____	47 +72 _____ _____

Grade \_\_\_\_\_  
☆☆☆☆

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# Subtraction with borrowing

Make students understand why there is a need to borrow a digit. We need to explain to them that since the value of the tens place is bigger than the ones' place, we can borrow from the tens digit to make the number at the ones place bigger.

This can be remembered by this small trick:

## SUBTRACTION

More on TOP?

No need to STOP,

$$\begin{array}{r} 94 \\ - 53 \\ \hline 41 \end{array}$$

More on the FLOOR?

Go next DOOR

and take 10 MORE.

$$\begin{array}{r} 7\cancel{8}\cancel{2}^{12} \\ - 65 \\ \hline 17 \end{array}$$

Are they the SAME?

Zero is your GAME,

$$\begin{array}{r} 38 \\ - 18 \\ \hline 20 \end{array}$$



**MORE ON THE FLOOR?  
GO NEXT DOOR AND TAKE  
10 MORE!**

$$\begin{array}{r} 675 \\ - 29 \\ \hline 646 \end{array}$$

The diagram illustrates the borrowing process for the subtraction  $675 - 29$ . A vertical box highlights the tens place, containing the digits 7 and 9. A green arrow points from the tens place to the ones place, indicating that 10 is being borrowed from the tens place to add to the ones place. The result, 646, is shown in green below the horizontal line.

- Now try to solve these problems:

$$\begin{array}{r} 73 \\ - 21 \\ \hline \end{array}$$

$$\begin{array}{r} 97 \\ - 14 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ - 19 \\ \hline \end{array}$$

$$\begin{array}{r} 68 \\ - 13 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ - 77 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ - 21 \\ \hline \end{array}$$

$$\begin{array}{r} 53 \\ - 20 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ - 59 \\ \hline \end{array}$$

$$\begin{array}{r} 78 \\ - 36 \\ \hline \end{array}$$

$$\begin{array}{r} 49 \\ - 14 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ - 42 \\ \hline \end{array}$$

$$\begin{array}{r} 74 \\ - 69 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ - 71 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ - 86 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 16 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ - 64 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ - 57 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ - 14 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ - 15 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ - 58 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ - 22 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ - 38 \\ \hline \end{array}$$

$$\begin{array}{r} 61 \\ - 56 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ - 79 \\ \hline \end{array}$$











# WORD PROBLEMS:

Name \_\_\_\_\_

Date \_\_\_\_\_



## ADDITION & SUBTRACTION PROBLEMS TO 15 SHEET 1

		WORKING OUT
1)	I have 8  I buy 4  more. How many do I have now? _____	
2)	There are 13  3  fly away. How many are left? _____	
3)	Newton has 14  Sally has 11  What is the difference? _____	
4)	There are 10  in a parking lot. 5 more  come along. How many are there in total? _____	
5)	Frazer has 6  . Flame has 7   What is the sum? _____	

Joan grew 33 turnips and 19 watermelons. Benny grew 47 turnips. How many turnips did they grow in total ?

\_\_\_\_\_

Jessica picked 25 apples and Tom picked 29 apples. Sandy picked 26 pears. How many apples were picked in all ?

\_\_\_\_\_

Tim's high school played forty-six basketball games this year, thirty-eight of the games were played at night. He attended seventeen games. How many basketball games did Tim miss ?

\_\_\_\_\_

Mary had 36 baseball cards, and 5 were torn. Keith bought 10 of Mary's baseball cards. How many baseball cards does Mary have now ?

\_\_\_\_\_

Dan found forty-four seashells and thirty-seven starfish on the beach. He gave eighteen of the seashells to Sally. How many seashells does Dan now have ?

\_\_\_\_\_

Sally has thirty-nine yellow and twenty-five red balloons. Jessica took thirteen of Sally's yellow balloons. How many yellow balloons does Sally now have ?

\_\_\_\_\_

Jason has thirty-four books and he has read five of them. Benny has forty-four books. How many books do they have together ?

\_\_\_\_\_

There are 49 rulers and 15 pencils in the drawer. Fred placed 24 more rulers in the drawer. How many rulers are now there in total ?

\_\_\_\_\_

There are 39 rose bushes and 17 popular trees currently in the park. Park workers will plant 42 more rose bushes today. How many rose bushes will the park have when the workers are finished ?

\_\_\_\_\_

