

SPRINGBOARD 3 • SPRINGBOARD 3 • SPRINGBOARD 3 • SPRINGBOARD 3 • SPRINGBOARD 3 • SPRINGBOARD 3 • SPRINGBOARD 3 • SPRINGBOARD 3

PART 3

UNIT  
**10**

**READING SCALES**

# Unit 10

## • SESSION 1 •

**TOTAL TIME**30  
MINUTES**OBJECTIVES**

- Read a simple scale to the nearest labelled division
- Round numbers less than 100 to the nearest 10

**VOCABULARY**

multiples of ten, scale, divisions (on a scale), round up, round down, vertical, horizontal

**RESOURCES**

individual white boards or number cards; number line or grid 0–99; paper copies of the 10-division line (see resource sheet 16); OHT of measuring beaker

**HOMEWORK**

Choose six numbers under 100, that are not multiples of 10. Round these up or down to the nearest 10.

**STARTER**5  
MINUTES

Ask children to give the answers to the following on their individual white boards or with number cards:  $10 - 4 = \square$ ,  $20 - 4 = \square$ ,  $30 - 4 = \square$ ,  $40 - 4 = \square$ ,  $50 - 4 = \square$ . Ask a child to describe the pattern.

Extend these to numbers beyond 100, (110, 120, 130 and so on).

Revise multiplication and division facts based on the two-, five- and ten-times tables.

**KEY QUESTION**

■ If you know  $10 - 4 = 6$ , how does this help you to work out  $70 - 4$ ?

**MAIN ACTIVITY**20  
MINUTES

Give out copies of resource sheet 16 and draw a 10-division line on the board. Label one end of the line on the board 20 and the other end 30. Point at the marker in the middle. *What number is this?* If necessary, demonstrate on the number line or 0–99 grid. Point to other markers. *What number is this?* Ask children to point to the answers on their lines.

Change the labels on the line to 0 and 100. Ask the children to show you where 50 is and then ask them to show you 30. It may help to hold the strips vertically to match the multiples of ten on the 0–99 grid.

Now label one end of the line 40 and the other 50. Point to the third marker. *What number is this? Which end is this nearer to?*

Demonstrate that 43 is nearer to 40 than it is to 50. We round it down to the nearest multiple of 10. Write  $43 \rightarrow 40$  on the board, say that 43 is nearer to 40. Point to 48. *Which end is this nearer to?*

Demonstrate that it is nearer to 50. We round it up to the nearest multiple of 10. Write  $48 \rightarrow 50$  on the board.



Change to a 10–20 line. Demonstrate that 15 is in the middle. Explain that it is usual to round up when the digit is 5. Point to some other markers and ask what numbers they stand for. Now tell the children to turn their paper round, so that the line is vertical rather than horizontal. Make sure that all the children understand these terms. Ask some more questions.

*Does it matter if the scale is vertical rather than horizontal?*

Tell the children to round each of the numbers up or down to the nearest 10.

If there is time, point to some numbers on the 0–99 grid and ask the children to round them to the nearest 10.

Explain activity sheet 10.1, which the children should complete before the next session.

#### KEY QUESTIONS

- Why aren't all the numbers written on the scale?
- What helps you to work out numbers not marked on the scale?

#### PLENARY

5  
MINUTES

Consider with the children the two questions above. Ask the children to point to the middle division on their 10-division line.

*What number will go here when the line begins with 50 and ends with 60? Begins with 100 and ends with 110? Begins with zero and ends with 10? Begins with zero and ends with 20?*

Finish by asking: *How many numbers can you round up or down to 50? What are they (45 to 49 and 51 to 54)?*

## Unit 10

## SESSION 2

## TOTAL TIME

30  
MINUTES

## OBJECTIVES

- Read a simple scale to the nearest labelled division
- Round numbers less than 100 to the nearest 10

## VOCABULARY

scale, divisions (on a scale)

## RESOURCES

OHT of till receipt (resource sheet 17);  
OHT of beaker (resource sheet 18);  
counting stick

## STARTER

5  
MINUTES

Look at the OHT of a till receipt. Ask the children to identify prices under £1, then take turns to round the numbers up or down to the nearest 10p. Write the answers on the board and put them in order.

Tell the children that when a number ends in a 5 we round the number up to the next multiple of 10.

25 rounds to 30

55 rounds to 60 and so on.

## KEY QUESTIONS

- How do we round numbers ending in the digit 5?
- What is 55 rounded to the nearest 10?
- What are 54 and 56 rounded to the nearest 10?

## MAIN ACTIVITY

20  
MINUTES

Count along a counting stick and back in tens. Tell the children that one end of the counting stick is zero and the other is 100. Repeat, but this time hold the stick in a vertical position. Point to different positions and ask children what number they represent. At first, focus on multiples of ten, then include 25, 55 and 95 in the middle of a section.

Tell the children that one end is zero and the other is 100. What is halfway? Point to this division. Tell them that one end is zero and the other is now 20. What is halfway? Repeat with one end as 10 and the other 20, then one end as zero and the other as 50.



Show the OHT of the measuring beaker. Explain that the scale shows cupfuls. The top of the scale is 100 cupfuls. Ask children where they think the level of 40 cupfuls of water would be. How do they know? Do the same for 95 and 10 cupfuls.

Tell them that the top of the scale is now 50 cupfuls.

*Where would the level be for 25 cupfuls? 5 cupfuls? 10 cupfuls?*

Explain activity sheet 10.2.

**KEY QUESTION**

- What do we need to know in order to mark a particular number of cupfuls on a scale?

**PLENARY****5**  
MINUTES

Refer again to the OHT of the beaker.

*How do you work out a position on the scale?*

Emphasise that you must think about the size of each division. You need to find the nearest labelled point and count on.

Name .....

Date .....

Dear Parents/Carers,

We have been learning to round numbers up or down to the nearest multiple of 10. Please help your child with the task below.

Thank you for your help.

Your child's teacher

### Rounding up or down

Numbers ending with the digits 1 to 4 are rounded down and those ending with the digits 5 to 9 are rounded up. This means, for example, that we round 62 down to 60, while we round 68 up to 70. We always round numbers ending in 5 up to the next multiple of 10.

Choose any five numbers below 100, that are not multiples of 10, and write them in the column on the left. Round them to the nearest multiple of 10 in the right-hand column.

Chosen number	Rounded to the nearest multiple of 10

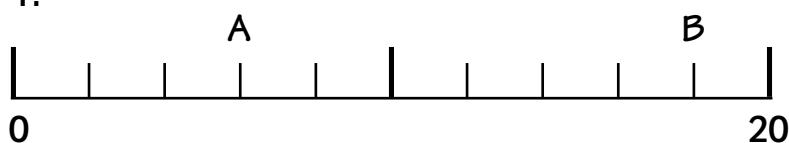
Name .....

Date .....

**Activity sheet**

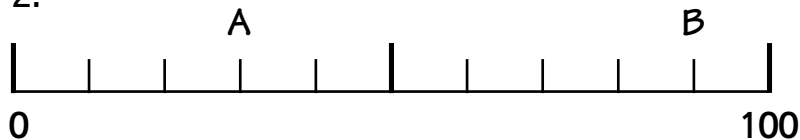
**10.1**

1.



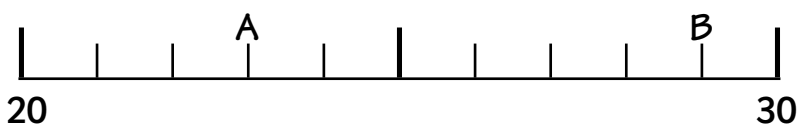
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2.



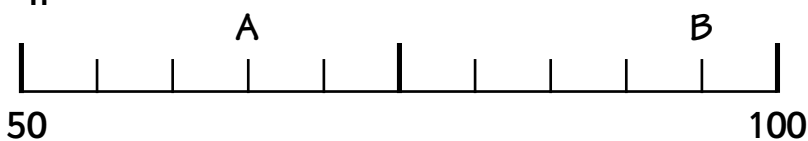
The halfway point is ..... A is ..... B is .....

3.



The halfway point is ..... A is ..... B is .....

4.



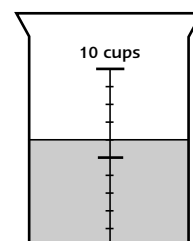
The halfway point is ..... A is ..... B is .....

5. How much water is in the container?

..... cups

How many more cups do you need to fill the container to the 10 cups mark?

..... cups



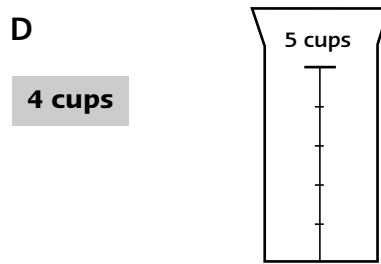
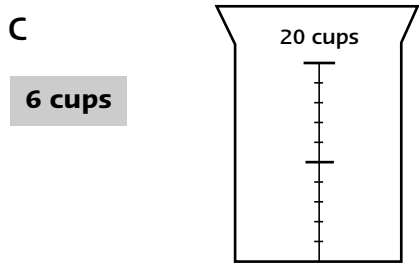
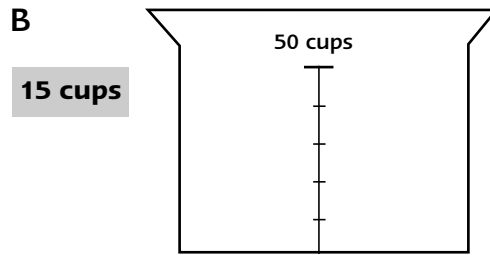
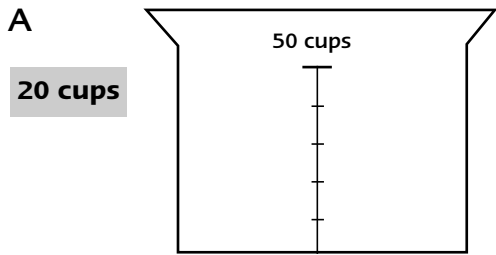
Name .....

Date .....

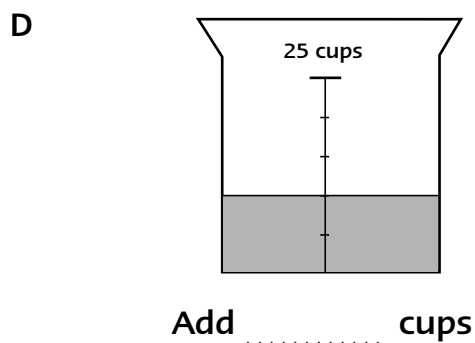
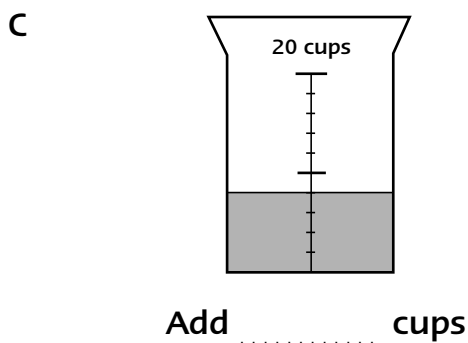
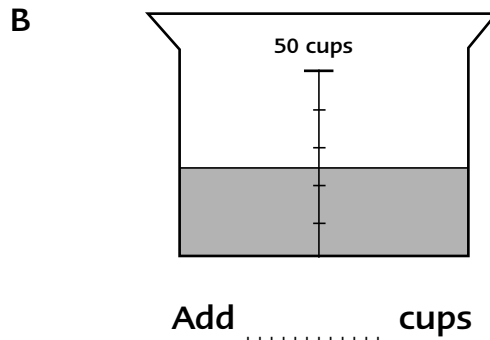
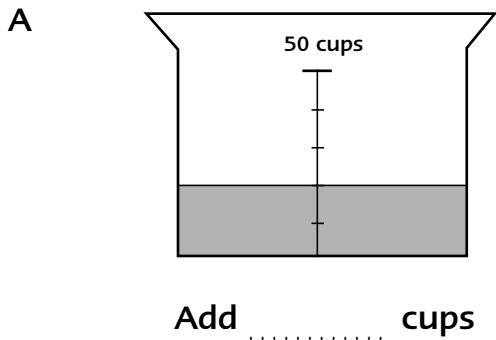
Activity sheet

10.2

1. Draw the level of water on each container.

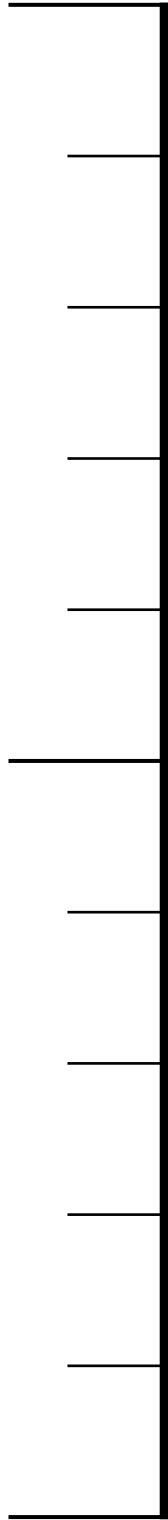


2. Work out how much water to add to each container to fill it to the top mark.





Unit 10  
RESOURCE SHEET 16



## Unit 10

## RESOURCE SHEET 17

## JOE S SUPERMARKET

	£
Eggs Medium 6	1.25
Apples Cox 1kg	0.48
Tomatoes 500g	0.78
Potatoes Bag	1.66
Onions 500g	0.52
Milk Semi-Skim	0.26
Yoghurt x4	1.40
Cheddar 250g	0.96
Chicken FR	5.85
Wholemeal Loaf	0.69
Bread Rolls x6	0.96
Crispbread	0.51
Teabags 40-Pack	0.99
Lemons x2	0.86
Bananas x5	0.75
Cornflakes 500g	1.62

Unit 10  
**RESOURCE SHEET 18**



OHT

