Grade 3 Mathematics: Data and Probability

Free sample lesson

Ontario curriculum: Mathematics (2020), Strand D: Data. 15 days.

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This is Lesson 1 of 12 from the full unit, exactly as it appears in the Teacher Guide, followed by the student worksheet. The full unit is at unitplans.ca.

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Lesson 1: Sort with a Carroll diagram

1 day · about 40 minutes · D1.1

> **Learning goal**
>
> - We are learning to sort things by two features in a Carroll diagram.

> **Success criteria**
>
> - I can sort things by colour and shape.
> - I can count the things in each box.

Materials

- Attribute blocks or paper shapes
- Yarn or masking tape
- Labels for the boxes

What students do with their hands

Students sort real shape blocks onto a floor Carroll diagram made with yarn, then say the rule for each box.

Minds On (8 min)

1. Hold up a mix of red and blue shapes. Ask: "How could we sort these shapes?"
2. Sort by colour first. Then sort by shape.

Action (24 min)

1. Make a floor table with two columns and two rows. Label it red / not red and circle / not a circle.
2. Students place shapes in the right box and say why.

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3. Ask what to do with a blue square. It goes in "not red" and "not a circle".

4. Students complete the worksheet.

Consolidation (8 min)

1. Share one box and tell its rule.
2. Exit: "Where does a red square go?"

Questions to ask

- What is the rule for this box?
- Which box has the most things?

Watch for

- Some students leave out the "not" boxes. Show that every shape fits in one box.

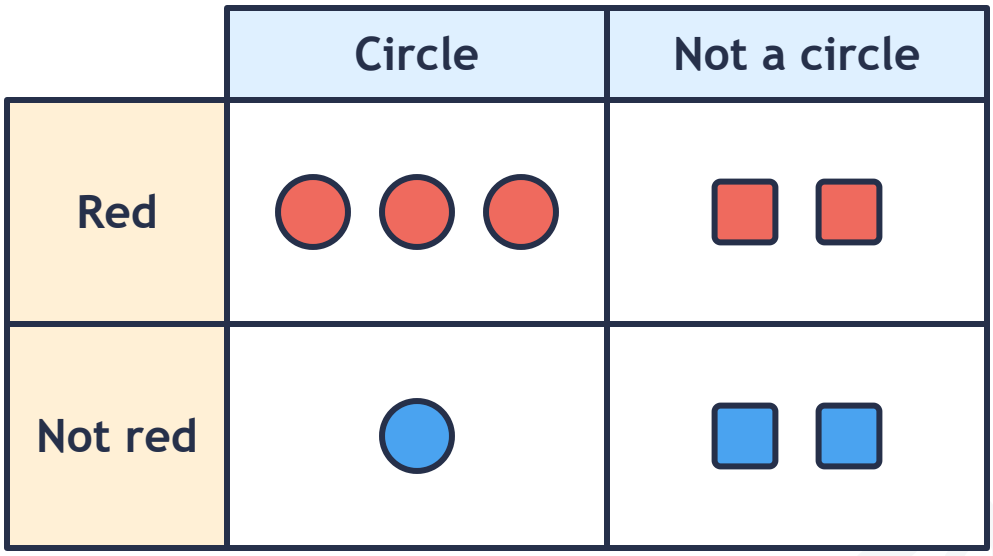
Differentiation

Support	Extend
Sort by one feature first, then add the second.	Make a new Carroll diagram with other features.

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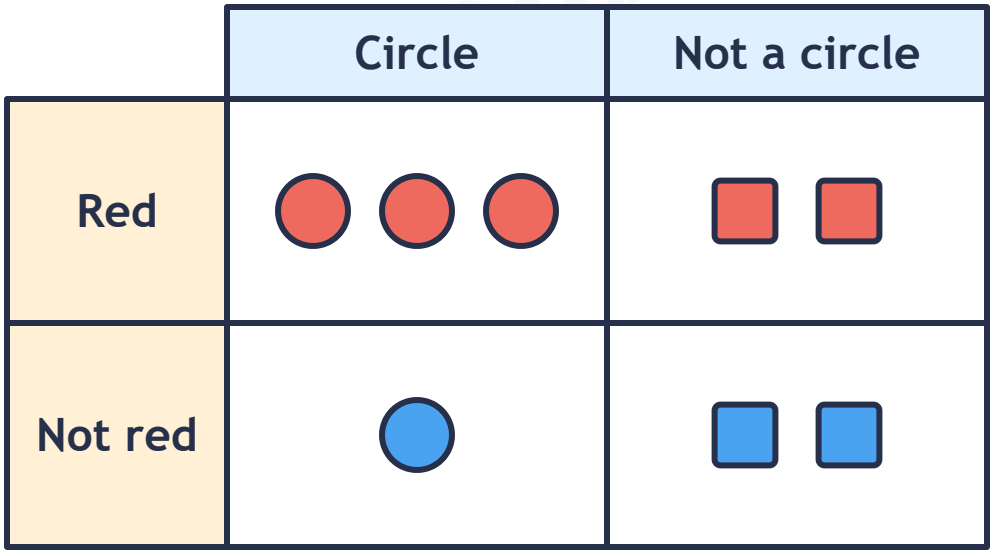
Answer key: Sort the shapes

1. How many red circles?



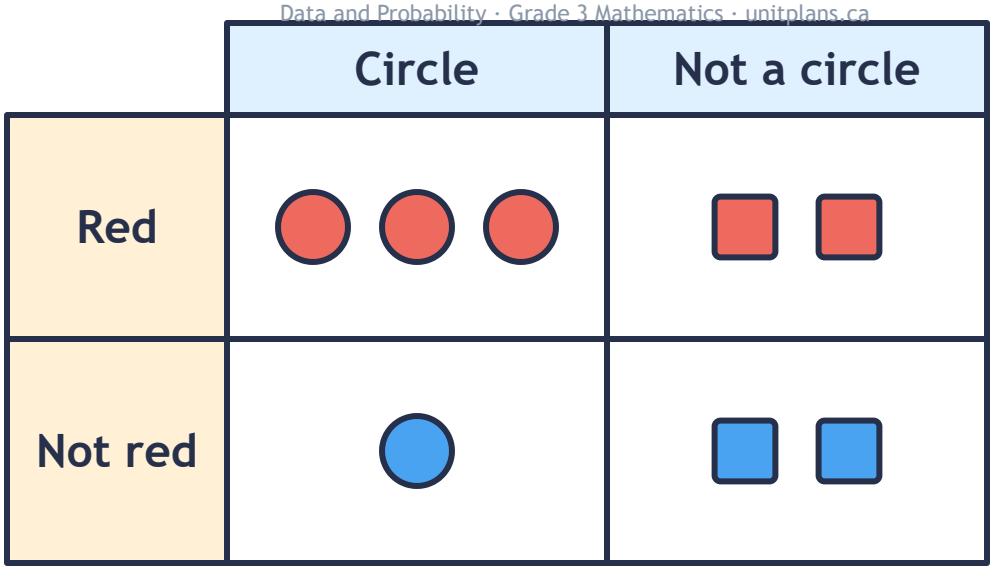
> **Answer:** 3

2. How many blue shapes?



> **Answer:** 3

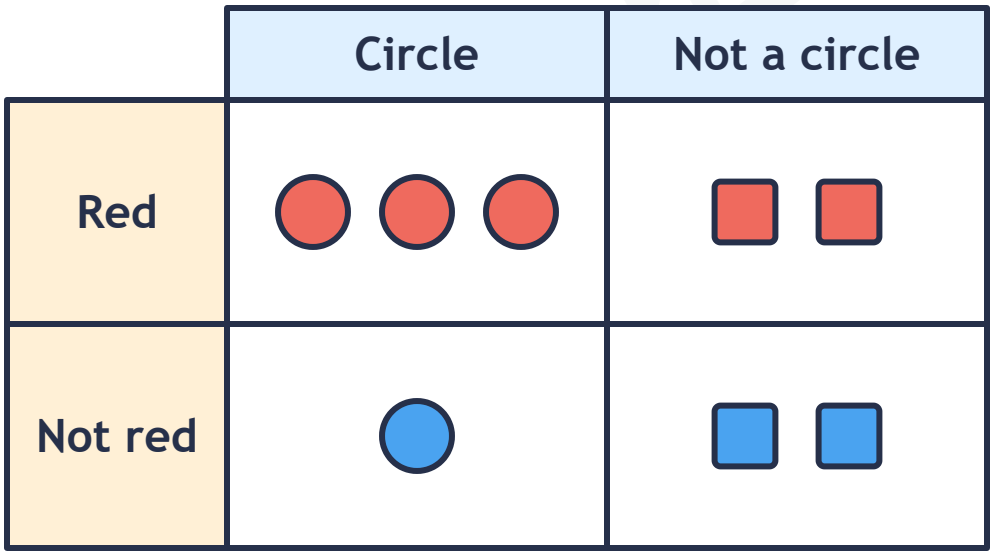
3. How many are not circles?



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> **Answer:** 4

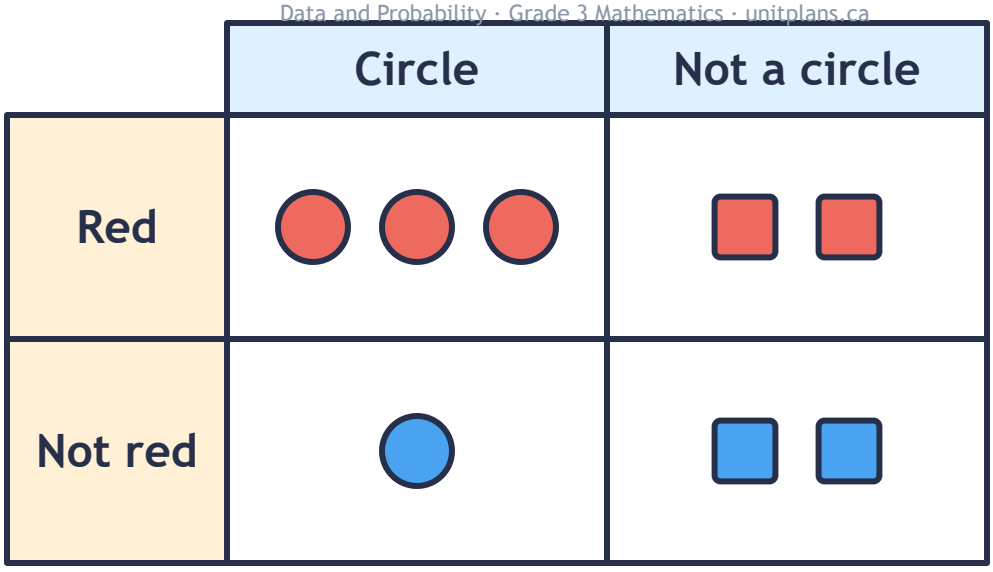
4. Colour the box with the most shapes.



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> **Answer:** The red circle box (3 shapes).

5. Sort the shapes. Draw them in the table.



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Answer: Red circles, red squares, blue circles and blue squares are in the right boxes.

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Student worksheet: Sort the shapes

Success criteria

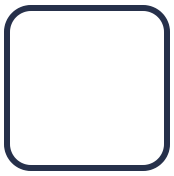
- I can sort things by colour and shape.
- I can count the things in each box.

Look at the table. Follow the question.

1 **How many red circles?**

	Circle	Not a circle
Red		
Not red		

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2 How many blue shapes?

	Circle	Not a circle
Red		
Not red		

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3 How many are not circles?

	Circle	Not a circle
Red		
Not red		

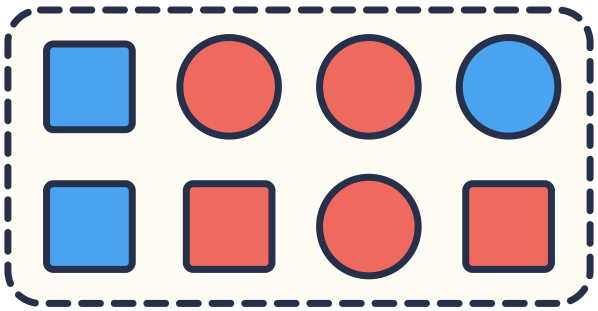
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4 Colour the box with the most shapes.

	Circle	Not a circle
Red		
Not red		

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5 Sort the shapes. Draw them in the table.



	Circle	Not a circle
Red		
Not red		