

WA5MNAUN7

Understanding number

Core + Challenge

NAPLAN-style

Introducing Percentages

I can explain that per cent means out of 100, and that 100% is one whole.

Name: _____ Date: _____ Score: _____ / 57

Key idea

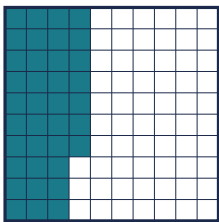
Per cent means **out of 100**. We write it with the sign %.

A 100-grid has 100 equal squares. Each square is **1%** of the grid.

100% is the **whole** thing. 100% is the same as 1 whole. 0% means none of it.

Example: 37 squares out of 100 are shaded, so **37%** is shaded. $100 - 37 = 63$, so **63%** is **not** shaded.

37 out of 100 squares = 37%



100% = the whole = 1



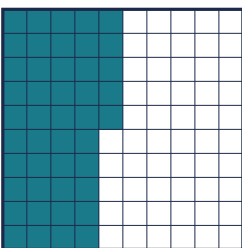
A

Warm up *read and shade percentages*

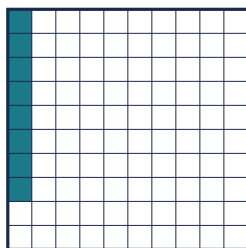
/ 16 marks

What **percentage** of each grid is shaded? 1 mark each.

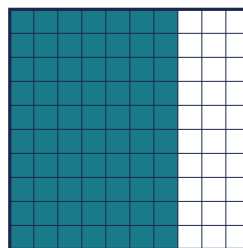
1



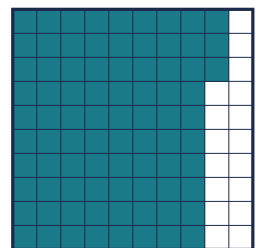
2



3



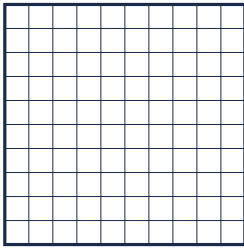
4



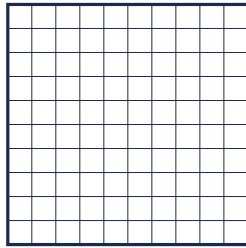
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Shade the grid to show each percentage. 1 mark each.

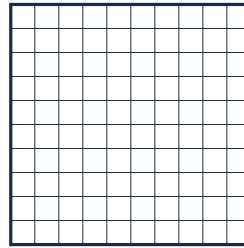
5 Shade **30%**



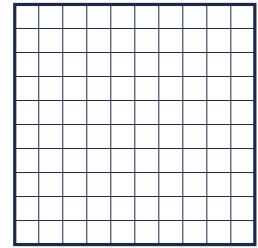
6 Shade **64%**



7 Shade **5%**

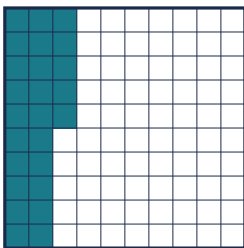


8 Shade **91%**

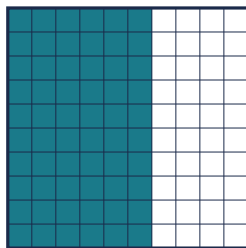


What percentage is **not** shaded? 1 mark each.

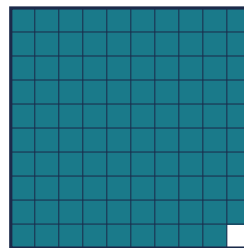
9



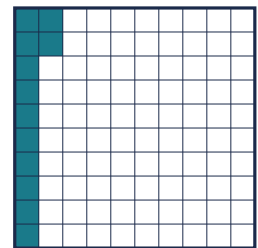
10



11



12



Write the percentage in the box. 1 mark each.

13 **61** out of 100 =

14 $\frac{9}{100} =$

15 The **whole** cake =

16 **Half** of a 100-grid =

B Practise *use the skill*

/ 22 marks

1 Each battery has **10** equal parts. **a)** and **b)** What percentage charge does each battery show? **c)** Shade the empty battery to show **50%**. [3 marks]



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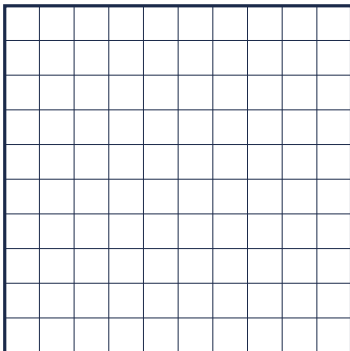
- 2 A spelling test has **100** words. Mia spells **86** words correctly. Ben spells **9** words **wrong**. **a)** What percentage did Mia get? **b)** What percentage did Ben get? **c)** Who did better? [3 marks]

Answer: _____

- 3 A shoe shop has a sign: **50% off everything**. Shoes cost **\$36** before the sale. **a)** What does 50% off mean? **b)** What do the shoes cost in the sale? [2 marks]

Answer: _____

- 4 A garden bed in Kings Park has **100** plants. **45** are kangaroo paws and **30** are banksias. The rest are grevilleas. Shade the kangaroo paws in one way and the banksias in another way. What **percentage** of the plants are grevilleas? [3 marks]



Answer: _____

- 5 Draw a line to join each percentage to its meaning. [2 marks]

100% •

50% •

25% •

10% •

• half of it

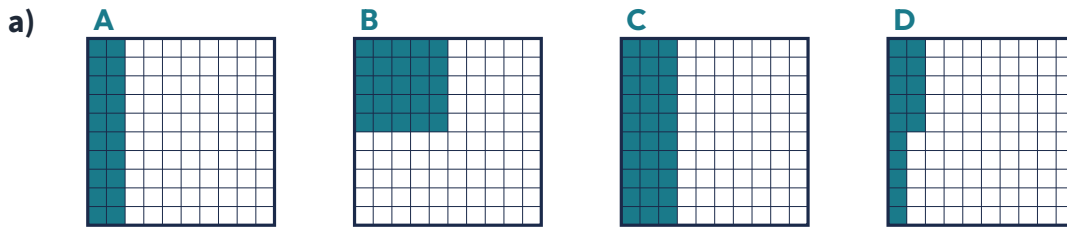
• one tenth of it

• all of it

• a quarter of it

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- 6 a) Which grid shows **25%**? Circle its letter. b) Which is **not** the same as 100%? Circle it. [2 marks]



- b)
- the whole

1

100 out of 100

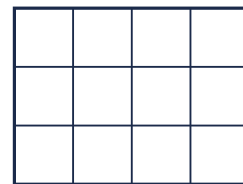
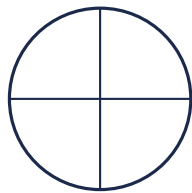
$\frac{1}{100}$

- 7 A game download is **60%** done. Shade the bar to show 60%. What percentage is still left to download? [2 marks]

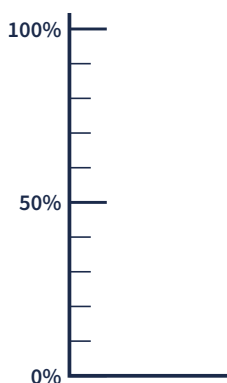


Answer: _____

- 8 **25%** is the same as a quarter. Shade **25%** of each shape. [3 marks]



- 9 Ella's water bottle is **100%** full in the morning. At lunch, **40%** of the water is left. Shade the bottle to show 40%. What percentage of the water did she drink? [2 marks]



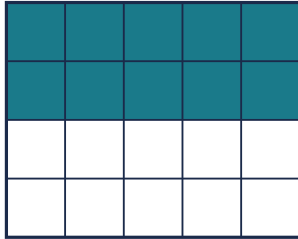
Answer: _____

C

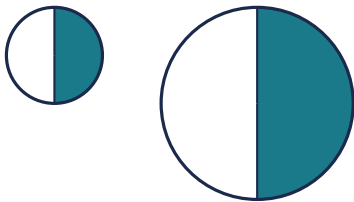
Think it through *explain your thinking*

/ 10 marks

- 1 This grid has **20** squares and **10** are shaded. Kai says “10% is shaded, because 10 squares are shaded.” Do you agree with Kai? Explain. [2 marks]



- 2 **True or false?** “50% of a small pizza is the same amount as 50% of a large pizza.” Explain. [2 marks]



- 3 **Always, sometimes or never true?** “To shade 50% of a shape, you shade 5 parts.” Circle one. Give examples. [2 marks]

Always

Sometimes

Never

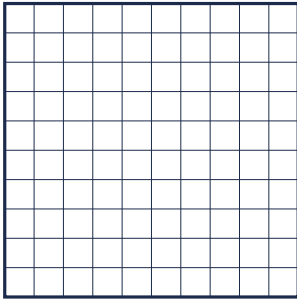
- 4 Which is the **odd one out**? 50%, half, $\frac{50}{100}$, 5 out of 100. Explain. [2 marks]

- 5 In Room 5, **30%** of the students walk to school. What percentage of the students do **not** walk? Explain how you know, using **100%**. [2 marks]

D**Challenge** *stretch yourself*

/ 9 marks

- 1** A school mural has **100** tiles. Amy paints **25%** of the tiles. Ben paints **10 more tiles** than Amy. Chloe paints **the rest**. **a)** What percentage does Ben paint? **b)** What percentage does Chloe paint? **c)** Who paints the most tiles? [3 marks]

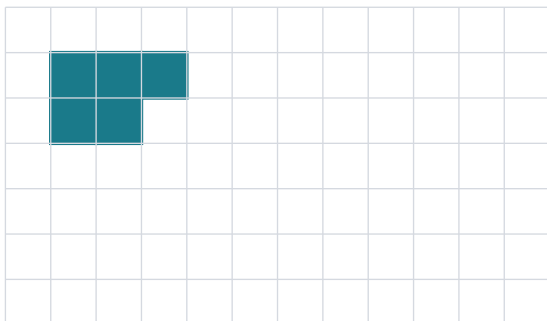


Answer: _____

- 2** The same T-shirt is sold at two shops. **Shop A:** \$30, with 50% off. **Shop B:** \$24, with \$10 off. Which shop is cheaper, and by how much? Show your working. [3 marks]

Answer: _____

- 3** The shaded shape is **10%** of a whole shape. **a)** How many squares are in the whole shape? **b)** How many squares are in **50%** of the whole shape? **c)** Shade a new shape on the grid that is 50% of the whole shape. [3 marks]



Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 22 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 57**Want help with Year 5 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**