

WA6MNACN5

Calculating with number

Core + Challenge

Percentage and Decimal of an Amount

I can find familiar percentages and decimals of whole numbers, including discounts when shopping.

Name: _____ Date: _____ Score: _____ / 56

Key idea

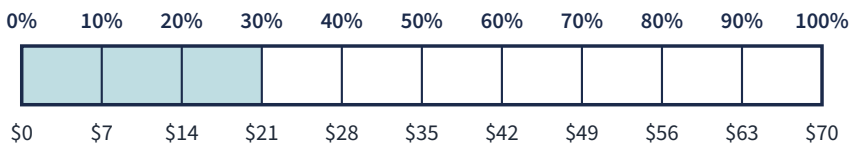
Per cent means out of 100. $50\% = \frac{1}{2}$, $25\% = \frac{1}{4}$, $75\% = \frac{3}{4}$, $20\% = \frac{1}{5}$, $10\% = \frac{1}{10}$, $1\% = \frac{1}{100}$.

10%: divide by 10. **1%**: divide by 100. **20%** = $2 \times 10\%$. **50%**: halve. **25%**: halve, then halve again.

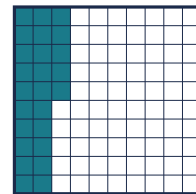
A **decimal** of an amount works the same way: $0.5 \times 44 = \text{half of } 44 = 22$; $0.25 \text{ of } 44 = 11$; $0.1 \text{ of } 44 = 4.4$.

Example: $30\% \text{ of } \$70 = 3 \times 10\% = 3 \times \$7 = \text{\$21}$.

30% of \$70 = \$21



25% = 25 out of 100 = $\frac{1}{4}$



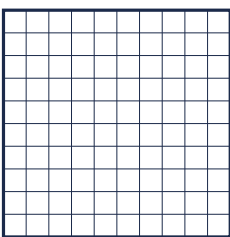
A

Warm up shade grids and fill percentage bars

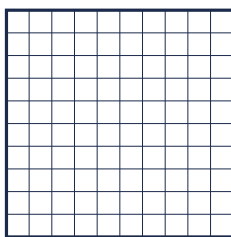
/ 16 marks

The whole grid is worth \$200. Shade the percentage. Write the amount. 1 mark each.

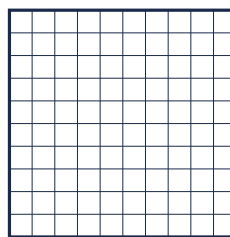
1 10% of \$200 =



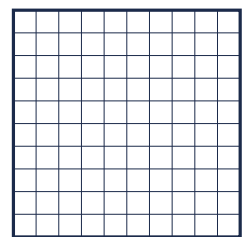
2 25% of \$200 =



3 1% of \$200 =



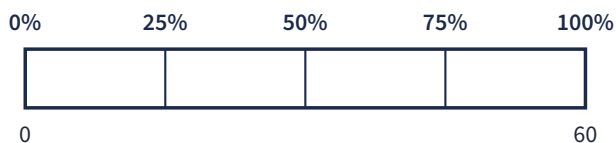
4 75% of \$200 =



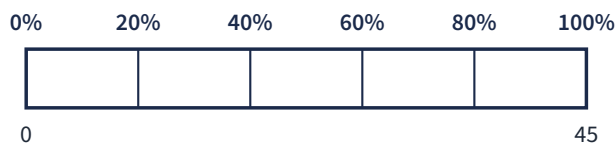
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Write the missing amounts on the lines under the bar. Then write the answer. 1 mark each.

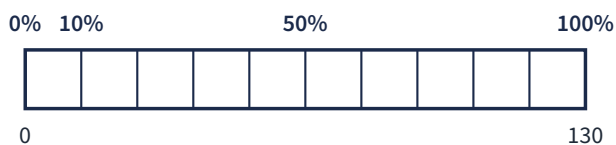
5 25% of 60 =



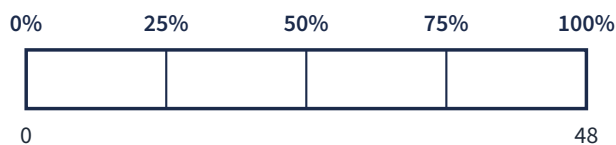
6 20% of 45 =



7 10% of 130 =



8 75% of 48 =



Work these out. 1 mark each.

9 50% of 86 =

10 10% of 250 =

11 1% of 400 =

12 25% of 36 =

13 0.5 of 90 =

14 0.1 of 70 =

15 0.75 of 20 =

16 20% of 35 =

B

Practise use the skill

/ 21 marks

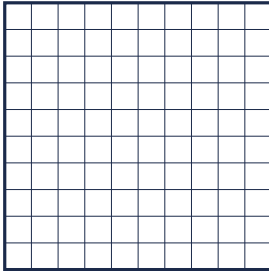
- 1 A surf shop in Scarborough has **25% off** everything. A pair of boardshorts usually costs **\$80**. Fill in the bar. How much is taken off? What is the sale price? [2 marks]



Answer: _____

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- 2 A school has **300** students. **20%** walk to school, **25%** come by bus and **50%** come by car. The rest ride a bike. Shade the grid and label the parts **W**, **B** and **C**. What percentage ride a bike? How many students is that? [3 marks]



Answer: _____

- 3 **10%** of \$240 is **\$24**. Use this to complete the table. [3 marks]

Percentage	10%	20%	25%	50%	75%	1%
Amount	\$24					

- 4 A rainwater tank holds **800 L** when it is full. It is **0.6** full. Shade the bar to show 0.6. How many litres are in the tank? [2 marks]



Answer: _____

- 5 Two shops sell the same jacket. **Shop A:** \$120, now **25% off**. **Shop B:** \$110, now **20% off**. Which shop is cheaper now? By how much? [3 marks]

Answer: _____

- 6 A maths test is out of **40** marks. **a)** Mia scored **75%**. How many marks did she get? **b)** Leo scored **32** out of 40. What percentage is that? [2 marks]

a) _____

b) _____

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- 7 Draw a line from each calculation to its answer.

[2 marks]

50% of 60 •	• 15
0.1 of 60 •	• 45
25% of 60 •	• 30
0.75 of 60 •	• 6

- 8 **4000** fans went to a WAFL football game. **a) 75%** of the fans supported the home team. How many is that? **b) 1%** of the fans won a free pie. How many pies were given away?

[2 marks]

a) _____

b) _____

- 9 A family's restaurant meal costs **\$45** before GST. GST adds **10%** of that price. What is the total price?

[2 marks]

Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Ben says **25% of 80 is 25**. Do you agree with Ben? Explain his mistake and find the right answer.

[2 marks]

- 2 **True or false?** "10% of 50 is the same as 50% of 10." Show how you know. Then use the same idea to find **4% of 25** the easy way.

[2 marks]

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- 3 **Always, sometimes or never true?** “20% of an amount is double 10% of the amount.” Explain, with an example. Circle one below. [2 marks]

☐ Always☐ Sometimes☐ Never

- 4 Which is the **odd one out**? 25% of 80, 0.5 of 40, 10% of 200, 75% of 24 Explain. [2 marks]

- 5 A game costs **\$80**. It is marked **50% off**. Then, at the checkout, Jake gets **another 50% off** the new price. Jake says, “50% + 50% = 100%, so the game is free!” Do you agree? Explain. [2 marks]

D Challenge *stretch yourself*

/ 9 marks

- 1 Use a percentage from the first list and an amount from the second list. Find **all** the ways to make exactly **\$30**. Percentages: 10%, 20%, 25%, 50%, 75%. Amounts: \$40, \$60, \$120, \$150, \$300. [3 marks]

Answer: _____

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- 2 After a **25%** discount, a scooter costs **\$90**. What was the price **before** the discount? Use the bar model to help.

[3 marks]

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Answer: _____

- 3 A Joondalup shop has **20% off** everything. Tia also has a **\$5 off** coupon for her whole purchase. She buys a **\$45** top and **\$30** shorts. **a)** The shop takes 20% off first, then the \$5. How much does Tia pay? **b)** Would she pay the same if the \$5 came off first? Show your working.

[3 marks]

Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 21 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 56**Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at edulift.com.au**