GCSE Maths: Percentages of an amount (Higher): answers

GCSE Maths - Percentages - Higher - Lesson 5.2

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at **websink.site/gcse/maths/ch05-percentages/higher/percentages-of-an-amount/**

Exercise 5B Percentages of an amount (non-calculator) Non-calculator

1 Work out each percentage. Do not use a calculator.

(a) 10% of 80

Answer: 8

(b) 20% of 150

Answer: 30

(c) 30% of 240

Answer: 72

(d) 50% of 64

Answer: 32

(e) 25% of 120

Answer: 30

(f) 5% of 200

Answer: 10

2 Work out each amount of money.

(a) 15% of £360

Answer: £54

(b) 35% of £80

Answer: £28

(c) 75% of £48

Answer: £36

(d) 12% of £250

Answer: £30

(e) 2% of £450

Answer: £9

(f) 1% of £7,600

Answer: £76

3 Work out each measurement.

(a) 45% of 600 g

Answer: 270 g

(b) 90% of 30 m

Answer: 27 m

(c) 60% of 250 ml

Answer: 150 ml

(d) 8% of 400 kg

Answer: 32 kg

(e) 70% of 3 km

Answer: 2.1 km

(f) 15% of 90 minutes

Answer: 13.5 minutes

4 **A coat costs £80. In a sale the price is reduced by 35%.**

(a) Work out the reduction.

Answer: £28

(b) Work out the sale price.

Answer: £52

5 **A school has 800 students. 45% of them are girls.**

(a) How many girls are there?

Answer: 360

(b) How many boys are there?

Answer: 440

6 **Sam earns £1,600 each month. He saves 15% of it.**

(a) How much does Sam save each month?

Answer: £240

(b) How much does Sam save in a year?

Answer: £2,880

7 **A bag has 240 sweets. 25% are red and 5% are green. How many sweets are neither red nor green?**

Answer: 168

8 **Which is bigger, 20% of 350 or 30% of 240? Show your working.**

Answer: 30% of 240 (72 is more than 70)

9 **Show that 20% of 60 is equal to 60% of 20.**

Answer: Both are 12

10 Ali says, "To find 15% of 80 you divide 80 by 15." Explain why he is wrong, and find the correct answer.

Answer: 12

11 Work out each amount. Do not use a calculator.

(a) 2.5% of £1,200

Answer: £30

(b) 12.5% of 640

Answer: 80

(c) 7.5% of 920

Answer: 69

(d) 0.5% of 3,000

Answer: 15

12 Without using a calculator, explain why 8% of 50 is equal to 50% of 8.

Answer: Both equal 4

Exercise 5C Percentages of an amount (calculator) Calculator allowed

1 Use a calculator to work out each amount.

(a) 12% of 650

Answer: 78

(b) 35% of 840

Answer: 294

(c) 7% of 1,250

Answer: 87.5

(d) 18% of 2,400

Answer: 432

(e) 4.5% of 360

Answer: 16.2

(f) 62% of 85

Answer: 52.7

2 Work out each amount of money. Give your answers to the nearest penny.

(a) 17.5% of £84.60

Answer: £14.81

(b) 23% of £149.99

Answer: £34.50

(c) 6.5% of £2,450

Answer: £159.25

(d) 3.2% of £19,500

Answer: £624.00

3 A restaurant adds a 12.5% service charge to a bill of £86.40. Work out the service charge.

Answer: £10.80

4 Priya earns £28,500 a year. She pays income tax of 20% on all the money she earns **over** £12,570. Work out how much tax she pays.

Answer: £3,186

5 A town has 48,500 people. 14.6% of them are aged over 65. How many people is this?

Answer: 7,081

6 An exam is marked out of 180. The pass mark is 65% of the total. Work out the pass mark.

Answer: 117 marks

7 A shop offers 12% cashback on purchases, but the cashback is never more than £25. Amira spends £250. How much cashback does she get?

Answer: £25

8 Estimate 48% of £603 by rounding. Then use a calculator to find the exact amount.

(a) Estimate the amount.

Answer: £300

(b) Work out the exact amount.

Answer: £289.44

9 Ben says, "150% of 40 is less than 40, because percentages are parts of 100." Is he right? Show how you know.

Answer: No. 150% of 40 = 60

10 A survey asks 1,250 people which drink they prefer. 38.4% choose tea. How many people choose tea?

Answer: 480

11 A charity raises £18,400. It spends 3.5% on costs and the rest goes to the cause. How much goes to the cause?

Answer: £17,756

12 Work out each amount.

(a) 0.35% of 82,000

Answer: 287

(b) 0.8% of £6,250

Answer: £50

13 Show that 15% of 260 is equal to 26% of 150.

Answer: Both are 39

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