

Free Basic Numeracy Test

10 questions with a worked solution for every one

This is a full-length practice test. Work through it under exam conditions if you can: give yourself 10 minutes and avoid checking the answers as you go. Every question is multiple choice with exactly one correct answer.

The worked solutions start after the last question. They show the method step by step and explain every wrong option, so a question you get wrong tells you something.

Questions	10
Suggested time limit	10 minutes
Format	Multiple choice, four options
Answers	Included, with full worked solutions

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Written by Guy Thornton. Updated 20 July 2026.

Questions

QUESTION 1 OF 10

Of 480 survey responses received, 35% were positive. How many responses were positive?

- A) 168
 - B) 312
 - C) 35
 - D) 16.8
-

QUESTION 2 OF 10

A fuel tank is filled to three-eighths of its 2,400-litre capacity. How many litres of fuel are in the tank?

- A) 900 litres
 - B) 300 litres
 - C) 1,500 litres
 - D) 6,400 litres
-

QUESTION 3 OF 10

A 72 kg batch of trail mix combines nuts, raisins and seeds in the ratio 3:4:2 by weight. How much does the heaviest ingredient weigh?

- A) 32 kg
 - B) 24 kg
 - C) 16 kg
 - D) 8 kg
-

QUESTION 4 OF 10

A museum recorded the following daily visitor numbers over five days. What was the mean number of visitors per day?

Daily visitor numbers at a museum, Monday to Friday

Day	Visitors
Monday	320
Tuesday	450
Wednesday	380
Thursday	510
Friday	340

- A) 400
 - B) 500
 - C) 380
 - D) 415
-

QUESTION 5 OF 10

A bottling line fills 250-millilitre bottles. How many litres of liquid are needed to fill 60 bottles?

- A) 15 litres
 - B) 15,000 litres
 - C) 150 litres
 - D) 1.5 litres
-

QUESTION 6 OF 10

A subscription currently costs £40 per month. The price is increased by 15%. What is the new monthly price?

- A) £46.00
 - B) £6.00
 - C) £55.00
 - D) £34.00
-

QUESTION 7 OF 10

A warehouse receives 8 pallets, each holding 45 boxes. During the day 296 boxes are shipped out. How many boxes remain in the warehouse?

- A) 64
 - B) 360
 - C) 296
 - D) 24
-

QUESTION 8 OF 10

What percentage of the monthly budget is spent on rent?

Monthly household budget of £2,000

Category	Amount (£)
Rent	800
Food	400
Transport	300
Other	500
Total	2,000

- A) 40%
 - B) 25%
 - C) 66.7%
 - D) 4%
-

QUESTION 9 OF 10

Four delivery drivers logged the parcels shown below in one day. What was the mean number of parcels per driver?

Parcels delivered per driver in one day

Driver	Parcels delivered
Driver A	84
Driver B	96
Driver C	72
Driver D	88

- A) 85
 - B) 340
 - C) 86
 - D) 113
-

QUESTION 10 OF 10

Five identical pumps can drain a reservoir in 6 hours. Working at the same rate, how long would 3 of the pumps take to drain the same reservoir?

- A) 10 hours
 - B) 3.6 hours
 - C) 18 hours
 - D) 30 hours
-

Answers and worked solutions

Every wrong option is explained too, not just the correct answer.

Question 1

Correct answer: A) 168

To find 35% of a number, multiply by 0.35: $480 \times 0.35 = 168$ positive responses. Working out the 65% that were not positive instead gives $480 \times 0.65 = 312$, which answers the opposite of the question. Reading the "35%" as a plain count of 35 ignores the 480 responses it is a share of. Using 3.5% by mistake (0.035×480) gives 16.8, which slips the decimal point one place and shrinks the answer tenfold.

Question 2

Correct answer: A) 900 litres

Three-eighths means three parts out of eight. One eighth is $2,400 \div 8 = 300$ litres, so three eighths is $3 \times 300 = 900$ litres. Stopping at one eighth gives 300 and forgets to multiply by the three parts asked for. The other five eighths, the empty space, is $5 \times 300 = 1,500$ litres, which measures what is missing rather than what is present. Dividing by the fraction instead of multiplying, $2,400 \times 8 \div 3$, gives 6,400, but taking a fraction of an amount always makes it smaller, not larger.

Question 3

Correct answer: A) 32 kg

Add the ratio parts: $3 + 4 + 2 = 9$ parts in total. One part is $72 \div 9 = 8$ kg. The heaviest ingredient is raisins at 4 parts, so $4 \times 8 = 32$ kg. Nuts are 3 parts, $3 \times 8 = 24$ kg, and seeds are 2 parts, $2 \times 8 = 16$ kg; these three figures sum back to 72 kg as a check. Answering 24 or 16 reads off the wrong ingredient, and answering 8 stops at the value of a single part instead of the four parts the heaviest ingredient is made of.

Question 4

Correct answer: A) 400

The mean is the total divided by how many values there are. The total is $320 + 450 + 380 + 510 + 340 = 2,000$ visitors across 5 days, so the mean is $2,000 \div 5 = 400$ per day. Dividing by 4 instead of 5 gives 500, which loses one of the days. Picking 380 gives the middle value when the days are sorted, which is the median, not the mean. Averaging only the highest and lowest days, $(510 + 320) \div 2$, gives 415, but the mean has to take every day into account, not just the two extremes.

Question 5

Correct answer: A) 15 litres

First find the total in millilitres: $250 \times 60 = 15,000$ ml. There are 1,000 millilitres in a litre, so divide by 1,000: $15,000 \div 1,000 = 15$ litres. Leaving the answer as 15,000 forgets to convert millilitres into litres at all. Dividing by 100 gives 150 and treats a litre as 100 ml, and dividing by 10,000 gives 1.5, shifting the decimal one place too far. The conversion is always 1,000 millilitres to a litre.

Question 6

Correct answer: A) £46.00

A 15% increase adds 15% of £40 on top of the original. 15% of 40 is $40 \times 0.15 = £6$, so the new price is $40 + 6 = £46.00$. Answering £6.00 gives only the size of the increase and forgets to add it to the original price. Adding £15 rather than 15% gives $40 + 15 = £55.00$, confusing a percentage with a flat amount of money. Subtracting the increase instead of adding it gives $40 - 6 = £34.00$, but a price rise makes the figure larger, not smaller.

Question 7

Correct answer: A) 64

First find how many boxes arrived: $8 \text{ pallets} \times 45 \text{ boxes} = 360 \text{ boxes}$. Then subtract the 296 shipped out: $360 - 296 = 64$ boxes remain. Answering 360 stops at the total received and forgets the boxes that left. Answering 296 gives the number shipped rather than the number left behind, which is the quantity the question asks for. Answering 24 comes from a multiplication slip: $8 \times 40 = 320$ while forgetting the $8 \times 5 = 40$, then $320 - 296 = 24$; the full product is $8 \times 45 = 360$.

Question 8

Correct answer: A) 40%

The rent share is the rent divided by the whole budget: $800 \div 2,000 = 0.40$, which is 40%. Using the £500 "Other" row by mistake gives $500 \div 2,000 = 25\%$, the wrong row. Dividing rent by the £1,200 spent on everything except rent ($2,000 - 800$) gives $800 \div 1,200 = 66.7\%$, which uses the wrong base: the base must be the full budget, not the budget with rent removed. Reading 0.40 as 0.04 gives 4% and misplaces the decimal point by one place.

Question 9

Correct answer: A) 85

Add the four figures: $84 + 96 + 72 + 88 = 340$ parcels. Divide by the 4 drivers: $340 \div 4 = 85$ parcels per driver. Answering 340 gives the total and forgets to divide. Answering 86 takes the median instead: sorted, the middle two are 84 and 88, and $(84 + 88) \div 2 = 86$, which is not the mean. Dividing by 3 rather than 4, $340 \div 3 = 113$, counts one driver too few; there are four drivers to share the total between.

Question 10

Correct answer: A) 10 hours

The whole job takes $5 \text{ pumps} \times 6 \text{ hours} = 30 \text{ pump-hours of work}$. With only 3 pumps, the time is $30 \div 3 = 10$ hours. Fewer pumps means more time, so the answer must be larger than 6. Answering 3.6 hours treats it as direct proportion, $6 \times 3 \div 5$, making the time fall when pumps are removed, which is backwards. Answering 18 hours multiplies the 6 hours by the 3 pumps, and answering 30 hours stops at the 30 pump-hours of total work without dividing it among the 3 pumps.

Where to go next

That was one full-length test. Employers usually set several, under time pressure, in formats tailored to the role you applied for.

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