

Data interpretation: tables, charts, and conclusions: open practice pack

100 untimed questions across 10 authored sections.

Detail	Value
Pack	cognitive-skills-data-interpretation
Source	cognitive-skills
Pack version	v1
Worksheet items	100
Authored hints	0
Worked explanations	100

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Learner worksheet

One hundred untimed self-check questions in ten themed sections, from simple table reading to spotting flawed conclusions. Every figure you need is given in the question. Work from the data alone.

Choose one answer for each item. For a delayed-recall item, read its study text, cover it, and then answer without looking back.

Reading values from tables

Find the right cell in each described table and read it accurately.

1. data-interpretation-s01-q01

A library's loan record for one week shows: Monday 42 loans, Tuesday 38, Wednesday 51, Thursday 45, Friday 60. How many loans were recorded on Wednesday?

- A. 51
- B. 45
- C. 38
- D. 60

Your answer: _____

2. data-interpretation-s01-q02

A weather station records monthly rainfall: April 62 mm, May 48 mm, June 35 mm, July 20 mm. Which month had the least rainfall?

- A. May
- B. July
- C. June

- D. April

Your answer: _____

3. data-interpretation-s01-q03

A market stall's takings table shows: apples £24, pears £31, plums £19, cherries £42. How much more did cherries take than plums?

- A. £11
- B. £18
- C. £23
- D. £27

Your answer: _____

4. data-interpretation-s01-q04

A car park log lists vehicles by type: cars 120, vans 35, motorcycles 18, lorries 9. How many vehicles were logged in total?

- A. 173
- B. 178
- C. 180
- D. 182

Your answer: _____

5. data-interpretation-s01-q05

A museum's visitor table shows: Saturday morning 210, Saturday afternoon 340, Sunday morning 180, Sunday afternoon 290. Which single period had the most visitors?

- A. Saturday afternoon
- B. Sunday afternoon
- C. Saturday morning
- D. Sunday morning

Your answer: _____

6. data-interpretation-s01-q06

A school's absence table reads: Year 7: 12, Year 8: 9, Year 9: 15, Year 10: 9, Year 11: 6. How many year groups recorded exactly 9 absences?

- A. 1
- B. 2
- C. 3
- D. 0

Your answer: _____

7. data-interpretation-s01-q07

A bus timetable lists departures at 08:10, 08:35, 09:00 and 09:25. How many minutes apart are consecutive departures?

- A. 15
- B. 20
- C. 25
- D. 30

Your answer: _____

8. data-interpretation-s01-q08

A stationery stock table shows: pens 240, pencils 310, rulers 95, erasers 150. Which item has the lowest stock?

- A. Pens
- B. Pencils
- C. Erasers
- D. Rulers

Your answer: _____

9. data-interpretation-s01-q09

A café's drinks table records: tea 58 cups, coffee 84 cups, hot chocolate 27 cups. How many cups were sold in total?

- A. 159
- B. 169
- C. 171
- D. 179

Your answer: _____

10. data-interpretation-s01-q10

A courier's delivery log shows: Week 1: 74 parcels, Week 2: 81, Week 3: 74, Week 4: 88. How many parcels were delivered in Week 2?

- A. 74
- B. 78
- C. 81
- D. 88

Your answer: _____

Comparing categories and totals

Compare bar-chart style category figures: differences, sums, and multiples.

11. data-interpretation-s02-q01

A bar chart of phone-case sales by colour shows: black 45, white 30, blue 25, red 20 units. How many more black cases than red cases were sold?

- A. 15
- B. 20
- C. 25
- D. 30

Your answer: _____

12. data-interpretation-s02-q02

Fun-run entrants by age group: under-18 64, 18–35 112, 36–50 98, over-50 46. Which two groups together account for exactly 210 entrants?

- A. 18–35 and 36–50
- B. Under-18 and 18–35
- C. 36–50 and over-50
- D. Under-18 and over-50

Your answer: _____

13. data-interpretation-s02-q03

A gym's attendance chart shows: Monday 85, Wednesday 92, Friday 78, Sunday 105. What is the combined attendance of the two busiest days?

- A. 177
- B. 183
- C. 190
- D. 197

Your answer: _____

14. data-interpretation-s02-q04

A bookshop's sales chart shows: fiction 120, biography 45, cookery 60, travel 30. How many times as many fiction books as travel books were sold?

- A. 3
- B. 4
- C. 5
- D. 6

Your answer: _____

15. data-interpretation-s02-q05

A chart compares two branches: North sold 340 units and South sold 290 units. How many more units would South need to sell to match North?

- A. 50
- B. 40
- C. 60
- D. 30

Your answer: _____

16. data-interpretation-s02-q06

An ice-cream stand's chart shows tubs sold by flavour: vanilla 72, strawberry 55, mint 38, mango 41. Which flavour sold fewer than 40 tubs?

- A. Vanilla

- B. Mango
- C. Mint
- D. Strawberry

Your answer: _____

17. data-interpretation-s02-q07

A chart shows attendance at four workshops: Workshop 1 had 28, Workshop 2 had 34, Workshop 3 had 22, Workshop 4 had 36. What was the total attendance?

- A. 110
- B. 120
- C. 124
- D. 130

Your answer: _____

18. data-interpretation-s02-q08

A recycling chart shows amounts collected: paper 340 kg, glass 275 kg, plastic 180 kg, metal 95 kg. What is the difference between the highest and lowest amounts?

- A. 165 kg
- B. 195 kg
- C. 225 kg
- D. 245 kg

Your answer: _____

19. data-interpretation-s02-q09

A chart shows quarterly sign-ups: Q1 150, Q2 180, Q3 210, Q4 240. Which quarter's sign-ups were exactly 60 higher than Q2's?

- A. Q1
- B. Q2
- C. Q3
- D. Q4

Your answer: _____

20. data-interpretation-s02-q10

A cinema's chart shows tickets sold by film: Comet Trail 420, Harbour Lights 385, Old Maps 310, Winter Fair 295. Which two films differ by exactly 35 tickets?

- A. Comet Trail and Harbour Lights
- B. Harbour Lights and Old Maps
- C. Old Maps and Winter Fair
- D. Comet Trail and Winter Fair

Your answer: _____

Percentages and proportions

Convert between counts, fractions, and percentages of a stated total.

21. data-interpretation-s03-q01

A survey of 200 commuters found that 90 travel by train. What percentage travel by train?

- A. 40%
- B. 45%
- C. 50%
- D. 55%

Your answer: _____

22. data-interpretation-s03-q02

A nursery's table shows 250 seedlings were planted and 20% failed to grow. How many seedlings survived?

- A. 50
- B. 150
- C. 180
- D. 200

Your answer: _____

23. data-interpretation-s03-q03

A staffing table shows 60 of a company's 240 employees work part-time. What fraction of the workforce is that, in simplest form?

- A. $\frac{1}{4}$
- B. $\frac{1}{3}$
- C. $\frac{1}{5}$
- D. $\frac{1}{6}$

Your answer: _____

24. data-interpretation-s03-q04

A results table shows votes for three candidates: Ade 4,500; Brooke 3,000; Chen 2,500. What percentage of all votes did Ade receive?

- A. 35%
- B. 40%
- C. 45%
- D. 50%

Your answer: _____

25. data-interpretation-s03-q05

A transport chart shows how pupils travel to school: 35% by car, 25% by bus, 30% by bicycle, and the remainder walk. What percentage walk?

- A. 20%
- B. 15%

- C. 5%
- D. 10%

Your answer: _____

26. data-interpretation-s03-q06

A till report shows a shop served 320 customers, of whom 40% paid by contactless card. How many customers is that?

- A. 118
- B. 128
- C. 132
- D. 148

Your answer: _____

27. data-interpretation-s03-q07

A logistics dashboard shows that 45 of 150 orders were delivered late. What percentage of orders were late?

- A. 30%
- B. 33%
- C. 35%
- D. 45%

Your answer: _____

28. data-interpretation-s03-q08

A survey table shows that 3 out of every 8 pupils chose science as their favourite subject. If 96 pupils were surveyed, how many chose science?

- A. 24
- B. 32
- C. 36
- D. 40

Your answer: _____

29. data-interpretation-s03-q09

A museum's income table shows: grants 55%, ticket sales 30%, donations 15%. If total income was £600,000, how much came from ticket sales?

- A. £150,000
- B. £165,000
- C. £180,000
- D. £330,000

Your answer: _____

30. data-interpretation-s03-q10

A festival report states that 40% of visitors bought a programme, and 5,200 programmes were sold, one per buyer. How many visitors attended in total?

- A. 12,000
- B. 13,000
- C. 14,000
- D. 15,600

Your answer: _____

Trends over time

Read line-graph style series: rises, falls, peaks, and simple forecasts.

31. data-interpretation-s04-q01

Monthly website visits were: January 8,000; February 9,000; March 11,000; April 10,000; May 13,000. Between which two consecutive months was the largest rise?

- A. January to February
- B. February to March
- C. March to April
- D. April to May

Your answer: _____

32. data-interpretation-s04-q02

Temperature readings through a day were: 06:00 4°C, 09:00 9°C, 12:00 14°C, 15:00 16°C, 18:00 12°C. At which time did the temperature peak?

- A. 09:00
- B. 12:00
- C. 15:00
- D. 18:00

Your answer: _____

33. data-interpretation-s04-q03

A river-level graph shows: Monday 2.4 m, Tuesday 2.9 m, Wednesday 3.1 m, Thursday 2.8 m. On how many days did the level rise compared with the day before?

- A. 1
- B. 2
- C. 3
- D. 0

Your answer: _____

34. data-interpretation-s04-q04

Annual subscriptions were: 2019: 1,200; 2020: 1,500; 2021: 1,800; 2022: 2,100. If the same yearly increase continues, what is the forecast for 2023?

- A. 2,400
- B. 2,300
- C. 2,250
- D. 2,500

Your answer: _____

35. data-interpretation-s04-q05

Weekly sales fell from 640 in week 1 to 560 in week 2 and 480 in week 3. If the same weekly fall continues, what will week 4's sales be?

- A. 440
- B. 420
- C. 400
- D. 380

Your answer: _____

36. data-interpretation-s04-q06

Quarterly profit was: Q1 £12,000; Q2 £15,000; Q3 £9,000; Q4 £18,000. Which quarter showed the largest change (up or down) from the previous quarter?

- A. Q2
- B. Q3
- C. Q2 and Q3 equally
- D. Q4

Your answer: _____

37. data-interpretation-s04-q07

A graph shows a delivery firm's daily fuel use falling steadily from 900 litres on day 1 to 660 litres on day 5. Assuming a constant daily fall, how much did it fall per day?

- A. 60 litres
- B. 48 litres
- C. 80 litres
- D. 75 litres

Your answer: _____

38. data-interpretation-s04-q08

A podcast's downloads doubled every month: March 500, April 1,000, May 2,000. If the pattern holds, how many downloads are expected in June?

- A. 3,000
- B. 4,000
- C. 2,500
- D. 6,000

Your answer: _____

39. data-interpretation-s04-q09

A chart of annual conference attendance shows: 2018: 940; 2019: 980; 2020: 310; 2021: 890. Which year's figure most likely reflects a one-off disruption rather than the underlying trend?

- A. 2020

- B. 2018
- C. 2019
- D. 2021

Your answer: _____

40. data-interpretation-s04-q10

Between 09:00 and 13:00 a car park's occupancy rose steadily from 40 cars to 200 cars. At that constant rate, how many cars were parked at 11:00?

- A. 100
- B. 110
- C. 140
- D. 120

Your answer: _____

Averages and rates

Work out means, medians, modes, and per-unit rates from small data sets.

41. data-interpretation-s05-q01

A results table lists five test scores: 62, 70, 58, 74, 66. What is the mean score?

- A. 66
- B. 65
- C. 68
- D. 70

Your answer: _____

42. data-interpretation-s05-q02

A depot's table shows daily deliveries over four days: 45, 52, 38, 49. What is the mean number of deliveries per day?

- A. 45
- B. 46
- C. 47
- D. 48

Your answer: _____

43. data-interpretation-s05-q03

A production log shows a machine fills 240 bottles in 30 minutes. At that rate, how many bottles does it fill per hour?

- A. 120
- B. 240
- C. 360
- D. 480

Your answer: _____

44. data-interpretation-s05-q04

What is the median of this data set: 12, 18, 7, 25, 14?

- A. 12
- B. 18
- C. 14
- D. 15

Your answer: _____

45. data-interpretation-s05-q05

A training log shows a cyclist covered 84 km in 3.5 hours. What was the average speed?

- A. 21 km/h
- B. 24 km/h
- C. 26 km/h
- D. 28 km/h

Your answer: _____

46. data-interpretation-s05-q06

A call-centre dashboard shows a mean of 40 calls answered per hour across a 7-hour shift. How many calls were answered in total?

- A. 280
- B. 240
- C. 270
- D. 320

Your answer: _____

47. data-interpretation-s05-q07

Rainfall over four weeks averaged 22 mm per week. The first three weeks measured 18 mm, 25 mm and 20 mm. How much rain fell in week 4?

- A. 21 mm
- B. 22 mm
- C. 24 mm
- D. 25 mm

Your answer: _____

48. data-interpretation-s05-q08

A shoe shop's sales table lists the sizes sold in one hour: 6, 7, 7, 8, 8, 8, 9. What is the mode?

- A. 6
- B. 7
- C. 8
- D. 9

Your answer: _____

49. data-interpretation-s05-q09

A specification table states a printer produces 45 pages per minute. How long will it take to print 630 pages?

- A. 12 minutes
- B. 14 minutes
- C. 15 minutes
- D. 16 minutes

Your answer: _____

50. data-interpretation-s05-q10

A payroll table shows three staff earn £12 per hour and one earns £16 per hour. What is the mean hourly rate across the four staff?

- A. £12.50
- B. £14
- C. £12
- D. £13

Your answer: _____

Shares of a whole: pie charts

Convert between pie-chart angles, percentage shares, and actual amounts.

51. data-interpretation-s06-q01

A pie chart splits a £2,000 monthly budget: rent 50%, food 25%, travel 15%, other 10%. How much is spent on travel?

- A. £200
- B. £250
- C. £300
- D. £350

Your answer: _____

52. data-interpretation-s06-q02

A pie chart is drawn accurately to scale. One segment measures 90° . What percentage of the whole does that segment represent?

- A. 15%
- B. 20%
- C. 30%
- D. 25%

Your answer: _____

53. data-interpretation-s06-q03

A sports club has 360 members, shown on a pie chart. The badminton segment measures 120° . How many members play badminton?

- A. 120

- B. 90
- C. 150
- D. 100

Your answer: _____

54. data-interpretation-s06-q04

A home-energy pie chart shows: gas 40%, electricity 35%, oil x%, renewables 5%. What is x?

- A. 15
- B. 20
- C. 25
- D. 30

Your answer: _____

55. data-interpretation-s06-q05

A pie chart shows how 80 employees commute: half drive, a quarter cycle, and the rest is split equally between bus and walking. How many employees walk?

- A. 20
- B. 8
- C. 12
- D. 10

Your answer: _____

56. data-interpretation-s06-q06

Two pie charts compare a shop's sales. In 2020, total sales were £40,000 with online at 30%. In 2023, total sales were £60,000 with online at 45%. By how much did online sales grow?

- A. £9,000
- B. £12,000
- C. £15,000
- D. £18,000

Your answer: _____

57. data-interpretation-s06-q07

A pie chart shows 1,200 votes on a park name: Riverside 35%, Hillcrest 40%, Meadow 25%. How many votes did Hillcrest receive?

- A. 420
- B. 480
- C. 300
- D. 500

Your answer: _____

58. data-interpretation-s06-q08

A pie chart represents 720 items in total. One category's segment measures 45° . How many items are in that category?

- A. 90
- B. 80
- C. 96
- D. 72

Your answer: _____

59. data-interpretation-s06-q09

A dessert-orders pie chart shows: cake 30%, ice cream 25%, fruit 20%, pudding 25%. Which two categories together make up exactly half of all orders?

- A. Cake and ice cream
- B. Ice cream and fruit
- C. Cake and fruit
- D. Fruit and pudding

Your answer: _____

60. data-interpretation-s06-q10

A charity's pie chart shows administration costs took 9% of the £150,000 it raised. How much was spent on administration?

- A. £13,500
- B. £12,500
- C. £15,000
- D. £9,000

Your answer: _____

Multi-step calculations from tables

Combine two or more table values (prices, rates, and adjustments) in sequence.

61. data-interpretation-s07-q01

A price list shows: notebook £2.40, pen £1.10, folder £3.25. What is the cost of 3 notebooks and 2 pens?

- A. £8.90
- B. £9.40
- C. £9.60
- D. £10.45

Your answer: _____

62. data-interpretation-s07-q02

A hotel's rate table shows: weeknight (Monday–Thursday) £85, weekend night (Friday–Sunday) £110. What does a guest pay for Thursday, Friday and Saturday nights?

- A. £305

- B. £280
- C. £330
- D. £255

Your answer: _____

63. data-interpretation-s07-q03

A payroll table shows Amir worked 38 standard hours at £11 per hour plus 4 hours of overtime paid at time-and-a-half. What was his total pay?

- A. £462
- B. £470
- C. £484
- D. £502

Your answer: _____

64. data-interpretation-s07-q04

A stock-movement table shows: opening stock 500, deliveries in 240, sales out 380, customer returns added back 15. What is the closing stock?

- A. 345
- B. 355
- C. 360
- D. 375

Your answer: _____

65. data-interpretation-s07-q05

An electricity bill shows a standing charge of 28p per day for 30 days plus 210 kWh used at 24p per kWh. What is the total bill?

- A. £58.80
- B. £56.40
- C. £60.20
- D. £54.60

Your answer: _____

66. data-interpretation-s07-q06

A fare table shows: adult return £14.50, child return £7.25. A family railcard gives 25% off adult fares only. What do 2 adults with the railcard and 2 children pay?

- A. £34.75
- B. £36.25
- C. £38.50
- D. £33.50

Your answer: _____

67. data-interpretation-s07-q07

An exchange-rate table shows £1 = €1.15. A traveller exchanges £400 and later spends €322. How many euros remain?

- A. €148
- B. €126
- C. €115
- D. €138

Your answer: _____

68. data-interpretation-s07-q08

A production table shows Line A makes 60 units per hour and ran for 6 hours; Line B makes 45 units per hour and ran for 8 hours. What was the combined output?

- A. 640
- B. 700
- C. 720
- D. 780

Your answer: _____

69. data-interpretation-s07-q09

A menu prices a main at £8.95, a side at £3.05 and a drink at £1.80, or a meal deal with one of each for £12.50. How much does the meal deal save?

- A. £1.30
- B. £1.20
- C. £1.50
- D. £0.95

Your answer: _____

70. data-interpretation-s07-q10

A van-hire tariff charges £45 per day plus 22p per mile. What does a two-day hire covering 250 miles cost?

- A. £135
- B. £140
- C. £145
- D. £150

Your answer: _____

Percentage change and index numbers

Calculate increases, decreases, reverse percentages, and index-linked values.

71. data-interpretation-s08-q01

A property table shows a house price rose from £180,000 to £198,000. What was the percentage increase?

- A. 8%
- B. 9%

- C. 11%
- D. 10%

Your answer: _____

72. data-interpretation-s08-q02

A dashboard shows monthly active users fell from 25,000 to 21,250. What was the percentage fall?

- A. 12%
- B. 15%
- C. 17.5%
- D. 18%

Your answer: _____

73. data-interpretation-s08-q03

A price index is set at 100 in 2020 and reads 130 in 2024. A basket of goods costing £46 in 2020 would cost how much in 2024, if it tracked the index exactly?

- A. £59.80
- B. £57.50
- C. £60.20
- D. £58.00

Your answer: _____

74. data-interpretation-s08-q04

A chart shows sales grew by 20% in year one, then fell by 20% from that higher level in year two. Compared with the start, sales are now:

- A. Exactly the same
- B. 4% higher
- C. 4% lower
- D. 20% lower

Your answer: _____

75. data-interpretation-s08-q05

A table shows factory output rose from 8,000 units to 10,000 units. What is the increase as a percentage of the original output?

- A. 20%
- B. 25%
- C. 30%
- D. 15%

Your answer: _____

76. data-interpretation-s08-q06

A ticket's price was cut by 30% in a sale and now costs £42. What was the original price?

- A. £54.60
- B. £55
- C. £58
- D. £60

Your answer: _____

77. data-interpretation-s08-q07

An index table shows: 2021 = 100, 2022 = 110, 2023 = 121. What was the percentage change from 2022 to 2023?

- A. 11%
- B. 21%
- C. 10%
- D. 12%

Your answer: _____

78. data-interpretation-s08-q08

A census table shows a town's population grew from 64,000 to 80,000. What was the percentage increase?

- A. 25%
- B. 20%
- C. 24%
- D. 30%

Your answer: _____

79. data-interpretation-s08-q09

A dashboard reports revenue of £2.4 million, described as 'up 20% on last year'. What was last year's revenue?

- A. £1.92 million
- B. £2.2 million
- C. £1.8 million
- D. £2.0 million

Your answer: _____

80. data-interpretation-s08-q10

An energy report shows annual use fell by 12% from 4,500 kWh. What is the new annual figure?

- A. 3,860 kWh
- B. 3,960 kWh
- C. 4,040 kWh
- D. 3,900 kWh

Your answer: _____

Combining two data sources

Each item gives two linked tables or charts. Join them correctly to answer.

81. data-interpretation-s09-q01

Table 1 shows store visitors: Monday 400, Tuesday 500. Table 2 shows the share of visitors who bought something: Monday 10%, Tuesday 8%. Which day had more purchases?

- A. The two days were equal
- B. Monday
- C. Tuesday
- D. It cannot be determined from the tables

Your answer: _____

82. data-interpretation-s09-q02

Chart A shows 240 units were sold last month. Chart B shows the unit price was £12.50 throughout. What was the revenue?

- A. £2,400
- B. £2,880
- C. £3,000
- D. £3,200

Your answer: _____

83. data-interpretation-s09-q03

A region table shows: North has 50,000 residents and 2,500 club members; South has 80,000 residents and 3,200 club members. Which region has the higher membership rate, and what is it?

- A. South, at 4%
- B. South, at 6.25%
- C. North, at 4%
- D. North, at 5%

Your answer: _____

84. data-interpretation-s09-q04

A ferry timetable shows a 10:40 departure with a crossing time of 1 hour 35 minutes. A connections table says the shuttle bus leaves 20 minutes after the ferry arrives. When does the shuttle bus leave?

- A. 12:15
- B. 12:35
- C. 12:25
- D. 12:45

Your answer: _____

85. data-interpretation-s09-q05

A project plan shows 180 hours of work are needed. A staffing table shows two team members are each available 30 hours per week. How many weeks will the work take?

- A. 2
- B. 2.5
- C. 3
- D. 6

Your answer: _____

86. data-interpretation-s09-q06

Chart 1 shows a bakery bakes 320 loaves per day. Chart 2 shows that on average 5% of loaves go unsold. On an average day, how many loaves are sold?

- A. 304
- B. 316
- C. 300
- D. 288

Your answer: _____

87. data-interpretation-s09-q07

Store A's price list shows a laptop at £600. Store B's advert says it sells the same laptop for 15% less than Store A. What is Store B's price?

- A. £490
- B. £510
- C. £525
- D. £540

Your answer: _____

88. data-interpretation-s09-q08

A league table shows a team played 10 matches: 6 wins, 2 draws, 2 losses. The scoring table awards 3 points for a win, 1 for a draw, 0 for a loss. How many points does the team have?

- A. 24
- B. 22
- C. 18
- D. 20

Your answer: _____

89. data-interpretation-s09-q09

A climate table shows a city receives 60 mm of rainfall in June. A gardening guide's table says the vegetable patch needs 90 mm per month, with any shortfall met by irrigation. How much irrigation is needed in June?

- A. 20 mm
- B. 25 mm
- C. 30 mm
- D. 35 mm

Your answer: _____

90. data-interpretation-s09-q10

Survey A found 58% of its 1,000 respondents support a new cycle lane. Survey B found 62% of its 500 respondents support it. How many supporters were counted across both surveys?

- A. 900
- B. 870
- C. 850
- D. 890

Your answer: _____

Evidence-based conclusions and data pitfalls

Judge what the data genuinely supports, and spot misleading presentations.

91. data-interpretation-s10-q01

A table shows Company X's profits rose every year from 2021 to 2024 while its workforce shrank each year. Which conclusion does the data alone support?

- A. Cutting staff caused the profits to rise
- B. Profit and workforce size moved in opposite directions over the period
- C. Profits will continue to rise next year
- D. Each employee became more productive every year

Your answer: _____

92. data-interpretation-s10-q02

A safety chart shows that 12% of e-scooter riders wear helmets, and that scooter injuries doubled last year. Which conclusion can be drawn from the data alone?

- A. Low helmet use caused the rise in injuries
- B. Helmeted riders were not among the injured
- C. Helmet use declined last year
- D. The number of injuries rose last year

Your answer: _____

93. data-interpretation-s10-q03

A poster claims '80% of adults exercise three or more times a week', citing a survey of 300 gym members. What is the main flaw in generalising this figure to all adults?

- A. 300 people is mathematically too few for any percentage
- B. Percentages from surveys can never be generalised
- C. Gym members are unlikely to be representative of all adults
- D. The survey should have reported a mean instead

Your answer: _____

94. data-interpretation-s10-q04

A trial table shows: treatment group of 400 people, 60 recovered within a week; placebo group of 100 people, 10 recovered within a week. Which statement is accurate?

- A. A higher proportion of the treatment group recovered (15% versus 10%)
- B. Six times as many recoveries proves the treatment is six times as effective
- C. The placebo group performed better than the treatment group
- D. The recovery rates of the two groups were equal

Your answer: _____

95. data-interpretation-s10-q05

A chart shows a town's average house price rose 8% last year. A columnist writes: 'Every house in the town is now worth 8% more.' How should this claim be judged against the data?

- A. The claim must be true, by definition of an average
- B. The claim must be false, because averages always hide falls
- C. The average could not have risen unless every price rose
- D. The claim is unsupported: an average can rise while individual prices vary

Your answer: _____

96. data-interpretation-s10-q06

A chart shows that ice-cream sales and swimming-related rescues both peak sharply in July. Which explanation is best supported?

- A. Eating ice cream makes swimming more dangerous
- B. Both are likely driven by a third factor, such as warm summer weather
- C. Rescue call-outs boost ice-cream sales
- D. The two figures matching must be a coincidence

Your answer: _____

97. data-interpretation-s10-q07

A bar chart's vertical axis starts at 90 rather than 0. Brand A's satisfaction bar reaches 94 and Brand B's reaches 98, so Brand B's bar looks twice as tall. Which reading is fair?

- A. Brand B's score is only slightly higher than Brand A's
- B. Brand B scored roughly twice as high as Brand A
- C. Brand A's score is close to zero
- D. A truncated chart makes any comparison impossible

Your answer: _____

98. data-interpretation-s10-q08

A punctuality table shows 91% of 20,000 weekday services ran on time, and 95% of 2,000 weekend services. A press release claims overall punctuality of 93%. How should the claim be judged?

- A. Correct: the average of 91 and 95 is 93
- B. The claim understates the true overall figure
- C. The claim overstates it. The weighted overall figure is about 91.4%
- D. The claim cannot be checked from the table

Your answer: _____

99. data-interpretation-s10-q09

A study table shows that participants who slept 7–8 hours scored higher on a test than those who slept under 6 hours. What can be concluded from this data alone?

- A. Sleeping more causes higher test scores
- B. In this study, sleep duration and test scores were associated
- C. Sleeping under 6 hours guarantees a lower score
- D. Higher test scores cause people to sleep longer

Your answer: _____

100. data-interpretation-s10-q10

A dashboard shows product returns fell from 8% to 6% of orders after a packaging redesign; no other information is given. Which is the strongest statement the data supports?

- A. Returns fell by two percentage points after the redesign
- B. The packaging redesign caused the fall in returns
- C. Returns will keep falling in future months
- D. Customers prefer the new packaging

Your answer: _____

Authored hints

This cognitive practice source does not publish authored hints. Every item is listed as missing a hint, and no hint text is generated or inferred.

100 worksheet items do not have an authored hint. No hint text was generated for them.

Answer key

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Data interpretation: tables, charts, and conclusions: open practice pack answer key

Item	Choice	Answer
data-interpretation-s01-q01	A	51
data-interpretation-s01-q02	B	July
data-interpretation-s01-q03	C	£23
data-interpretation-s01-q04	D	182
data-interpretation-s01-q05	A	Saturday afternoon
data-interpretation-s01-q06	B	2
data-interpretation-s01-q07	C	25
data-interpretation-s01-q08	D	Rulers
data-interpretation-s01-q09	B	169
data-interpretation-s01-q10	C	81
data-interpretation-s02-q01	C	25

data-interpretation-s02-q02	A	18–35 and 36–50
data-interpretation-s02-q03	D	197
data-interpretation-s02-q04	B	4
data-interpretation-s02-q05	A	50
data-interpretation-s02-q06	C	Mint
data-interpretation-s02-q07	B	120
data-interpretation-s02-q08	D	245 kg
data-interpretation-s02-q09	D	Q4
data-interpretation-s02-q10	A	Comet Trail and Harbour Lights
data-interpretation-s03-q01	B	45%
data-interpretation-s03-q02	D	200
data-interpretation-s03-q03	A	1/4
data-interpretation-s03-q04	C	45%
data-interpretation-s03-q05	D	10%
data-interpretation-s03-q06	B	128
data-interpretation-s03-q07	A	30%
data-interpretation-s03-q08	C	36
data-interpretation-s03-q09	C	£180,000
data-interpretation-s03-q10	B	13,000
data-interpretation-s04-q01	D	April to May
data-interpretation-s04-q02	C	15:00
data-interpretation-s04-q03	B	2
data-interpretation-s04-q04	A	2,400
data-interpretation-s04-q05	C	400
data-interpretation-s04-q06	D	Q4
data-interpretation-s04-q07	A	60 litres
data-interpretation-s04-q08	B	4,000
data-interpretation-s04-q09	A	2020
data-interpretation-s04-q10	D	120
data-interpretation-s05-q01	A	66
data-interpretation-s05-q02	B	46
data-interpretation-s05-q03	D	480
data-interpretation-s05-q04	C	14
data-interpretation-s05-q05	B	24 km/h
data-interpretation-s05-q06	A	280
data-interpretation-s05-q07	D	25 mm
data-interpretation-s05-q08	C	8
data-interpretation-s05-q09	B	14 minutes
data-interpretation-s05-q10	D	£13
data-interpretation-s06-q01	C	£300

data-interpretation-s06-q02	D	25%
data-interpretation-s06-q03	A	120
data-interpretation-s06-q04	B	20
data-interpretation-s06-q05	D	10
data-interpretation-s06-q06	C	£15,000
data-interpretation-s06-q07	B	480
data-interpretation-s06-q08	A	90
data-interpretation-s06-q09	C	Cake and fruit
data-interpretation-s06-q10	A	£13,500
data-interpretation-s07-q01	B	£9.40
data-interpretation-s07-q02	A	£305
data-interpretation-s07-q03	C	£484
data-interpretation-s07-q04	D	375
data-interpretation-s07-q05	A	£58.80
data-interpretation-s07-q06	B	£36.25
data-interpretation-s07-q07	D	€138
data-interpretation-s07-q08	C	720
data-interpretation-s07-q09	A	£1.30
data-interpretation-s07-q10	C	£145
data-interpretation-s08-q01	D	10%
data-interpretation-s08-q02	B	15%
data-interpretation-s08-q03	A	£59.80
data-interpretation-s08-q04	C	4% lower
data-interpretation-s08-q05	B	25%
data-interpretation-s08-q06	D	£60
data-interpretation-s08-q07	C	10%
data-interpretation-s08-q08	A	25%
data-interpretation-s08-q09	D	£2.0 million
data-interpretation-s08-q10	B	3,960 kWh
data-interpretation-s09-q01	A	The two days were equal
data-interpretation-s09-q02	C	£3,000
data-interpretation-s09-q03	D	North, at 5%
data-interpretation-s09-q04	B	12:35
data-interpretation-s09-q05	C	3
data-interpretation-s09-q06	A	304
data-interpretation-s09-q07	B	£510
data-interpretation-s09-q08	D	20
data-interpretation-s09-q09	C	30 mm
data-interpretation-s09-q10	D	890
data-interpretation-s10-q01	B	Profit and workforce size moved in opposite directions over the period

data-interpretation-s10-q02	D	The number of injuries rose last year
data-interpretation-s10-q03	C	Gym members are unlikely to be representative of all adults
data-interpretation-s10-q04	A	A higher proportion of the treatment group recovered (15% versus 10%)
data-interpretation-s10-q05	D	The claim is unsupported: an average can rise while individual prices vary
data-interpretation-s10-q06	B	Both are likely driven by a third factor, such as warm summer weather
data-interpretation-s10-q07	A	Brand B's score is only slightly higher than Brand A's
data-interpretation-s10-q08	C	The claim overstates it. The weighted overall figure is about 91.4%
data-interpretation-s10-q09	B	In this study, sleep duration and test scores were associated
data-interpretation-s10-q10	A	Returns fell by two percentage points after the redesign

Worked explanations

data-interpretation-s01-q01: Locate the day you are asked about before reading any number. The Wednesday entry is 51 loans.

data-interpretation-s01-q02: Scan the whole column for the smallest value rather than stopping at the first low number. July's 20 mm is the minimum.

data-interpretation-s01-q03: Pick out only the two rows the question names, then subtract: $£42 - £19 = £23$.

data-interpretation-s01-q04: Add every row, checking you have not skipped the smallest one: $120 + 35 + 18 + 9 = 182$.

data-interpretation-s01-q05: Compare all four periods individually rather than by day: Saturday afternoon's 340 is the highest single figure.

data-interpretation-s01-q06: Count every row that matches the exact value asked for. Year 8 and Year 10 both show 9, giving two groups.

data-interpretation-s01-q07: Check the gap between each neighbouring pair: 08:10 to 08:35 is 25 minutes, and the same gap repeats down the column.

data-interpretation-s01-q08: Read the quantity for every item before deciding: rulers, at 95, sit below all the others.

data-interpretation-s01-q09: Sum the three rows carefully: $58 + 84 + 27 = 169$ cups.

data-interpretation-s01-q10: Match the label first, then the value. The Week 2 row reads 81 parcels, even though nearby weeks share similar figures.

data-interpretation-s02-q01: Take the two named bars and subtract the smaller from the larger: $45 - 20 = 25$ units.

data-interpretation-s02-q02: Test each pairing against the target sum: $112 + 98 = 210$, while the other pairings give 176, 144 and 110.

data-interpretation-s02-q03: First rank the days to find the top two (Sunday 105 and Wednesday 92), then add them: $105 + 92 = 197$.

data-interpretation-s02-q04: A 'times as many' comparison is a division, not a subtraction: $120 \div 30 = 4$.

data-interpretation-s02-q05: The gap to close is the difference between the bars: $340 - 290 = 50$ units.

data-interpretation-s02-q06: Check each figure against the threshold, taking care with near-misses: only mint, at 38, falls below 40.

data-interpretation-s02-q07: Add all four bars, pairing numbers that make round sums to reduce slips: $(28 +$

$22) + (34 + 36) = 50 + 70 = 120$.

data-interpretation-s02-q08: Identify the extremes first (paper 340 kg and metal 95 kg), then subtract: $340 - 95 = 245$ kg.

data-interpretation-s02-q09: Work out the target value first ($180 + 60 = 240$), then find which bar matches it, Q4.

data-interpretation-s02-q10: Compute each candidate difference rather than estimating: $420 - 385 = 35$, while the other pairings give 75, 15 and 125.

data-interpretation-s03-q01: Divide the part by the whole and multiply by 100: $90 \div 200 = 0.45$, which is 45%.

data-interpretation-s03-q02: The question asks for the survivors, so use the remaining 80%: $0.80 \times 250 = 200$.

data-interpretation-s03-q03: Write the part over the whole and simplify: $60/240$ reduces to $1/4$.

data-interpretation-s03-q04: Total the votes first (10,000), then divide: $4,500 \div 10,000 = 45\%$. A percentage always needs the full total as its base.

data-interpretation-s03-q05: Category percentages of one whole must sum to 100, so the walkers make up $100 - (35 + 25 + 30) = 10\%$.

data-interpretation-s03-q06: Convert the percentage to a decimal and multiply: $0.40 \times 320 = 128$.

data-interpretation-s03-q07: Divide the late orders by the total: $45 \div 150 = 0.30$, so 30%, the raw count of 45 is not itself the percentage.

data-interpretation-s03-q08: Scale the ratio to the actual total: $96 \div 8 = 12$ groups of eight, and $12 \times 3 = 36$ pupils.

data-interpretation-s03-q09: Apply the ticket-sales share to the total: $0.30 \times \text{£}600,000 = \text{£}180,000$.

data-interpretation-s03-q10: Here the part is known and the whole is missing, so divide by the percentage: $5,200 \div 0.40 = 13,000$ visitors.

data-interpretation-s04-q01: Work out each month-on-month change (+1,000; +2,000; -1,000; +3,000): the biggest increase, +3,000, is from April to May.

data-interpretation-s04-q02: A peak is the highest point before the series turns downward: 16°C at 15:00, after which the reading falls.

data-interpretation-s04-q03: Compare each day with its predecessor: Tuesday and Wednesday rose, Thursday fell, so the level rose on two days.

data-interpretation-s04-q04: The series climbs by a constant 300 each year, so extending the pattern gives $2,100 + 300 = 2,400$.

data-interpretation-s04-q05: The fall is a constant 80 per week, so week 4 is projected at $480 - 80 = 400$.

data-interpretation-s04-q06: Measure the size of each change regardless of direction: +£3,000 into Q2, -£6,000 into Q3, and +£9,000 into Q4, the largest.

data-interpretation-s04-q07: Between day 1 and day 5 there are four daily steps, not five, so divide the total fall by 4: $(900 - 660) \div 4 = 60$ litres.

data-interpretation-s04-q08: A doubling pattern is multiplicative, not additive: $2,000 \times 2 = 4,000$ for June.

data-interpretation-s04-q09: An isolated sharp drop that largely reverses the following year is the signature of an outlier caused by a one-off event, not a genuine trend change.

data-interpretation-s04-q10: The rise is 160 cars over 4 hours, or 40 per hour; two hours in, occupancy is $40 + (2 \times 40) = 120$.

data-interpretation-s05-q01: Total the scores and divide by how many there are: $330 \div 5 = 66$.

data-interpretation-s05-q02: Add the four values (184) and divide by 4 to get 46 deliveries per day.

data-interpretation-s05-q03: Scale the rate to the time asked for: 30 minutes is half an hour, so an hour yields $240 \times 2 = 480$ bottles.

data-interpretation-s05-q04: Sort the values first (7, 12, 14, 18, 25); the median is the middle entry of the sorted list, 14.

data-interpretation-s05-q05: Average speed is distance divided by time: $84 \div 3.5 = 24$ km/h.

data-interpretation-s05-q06: A mean can be reversed into a total by multiplying by the number of periods: $40 \times 7 = 280$ calls.

data-interpretation-s05-q07: Rebuild the total from the mean ($22 \times 4 = 88$ mm), then subtract the known weeks: $88 - 63 = 25$ mm.

data-interpretation-s05-q08: The mode is the most frequent value: size 8 appears three times, more than any other.

data-interpretation-s05-q09: Divide the job size by the rate: $630 \div 45 = 14$ minutes.

data-interpretation-s05-q10: Weight each rate by how many staff earn it: $(3 \times £12 + 1 \times £16) \div 4 = £52 \div 4 = £13$, not the midpoint of the two rates.

data-interpretation-s06-q01: Apply the slice's percentage to the whole: $0.15 \times £2,000 = £300$.

data-interpretation-s06-q02: A full circle is 360° , so divide the angle by 360: $90 \div 360 = 1/4$, which is 25%.

data-interpretation-s06-q03: The segment is $120/360 =$ one third of the circle, and one third of 360 members is 120.

data-interpretation-s06-q04: Slices of one pie must total 100%, so $x = 100 - (40 + 35 + 5) = 20$.

data-interpretation-s06-q05: Driving takes 40 and cycling 20, leaving 20 employees; split equally, walking accounts for 10 of them.

data-interpretation-s06-q06: Percentages from different-sized wholes cannot be compared directly. Convert each to an amount first: $£27,000 - £12,000 = £15,000$.

data-interpretation-s06-q07: Multiply the share by the total number of votes: $0.40 \times 1,200 = 480$.

data-interpretation-s06-q08: Convert the angle to a fraction of the circle ($45/360 = 1/8$), then take that fraction of the total: $720 \div 8 = 90$.

data-interpretation-s06-q09: Add each candidate pair of shares and look for 50%: cake plus fruit gives $30 + 20 = 50\%$.

data-interpretation-s06-q10: Apply the percentage to the amount raised: $0.09 \times £150,000 = £13,500$. A 9% share is not the same as £9,000.

data-interpretation-s07-q01: Cost each line separately, then add: $(3 \times £2.40) + (2 \times £1.10) = £7.20 + £2.20 = £9.40$, ignoring the folder entirely.

data-interpretation-s07-q02: Classify each night against the table's bands before pricing it: $£85 + £110 + £110 = £305$.

data-interpretation-s07-q03: Work out each pay component at its own rate: $38 \times £11 = £418$, and overtime at $£16.50$ gives $4 \times £16.50 = £66$, totalling $£484$.

data-interpretation-s07-q04: Apply each movement with the correct sign: $500 + 240 - 380 + 15 = 375$. Returns come back into stock, so they are added.

data-interpretation-s07-q05: Calculate the two parts separately and convert pence to pounds: $£8.40$ standing charge + $£50.40$ usage = $£58.80$.

data-interpretation-s07-q06: Apply the discount only where the table allows it: adults cost $£29.00 \times 0.75 = £21.75$, children $£14.50$, giving $£36.25$.

data-interpretation-s07-q07: Convert first, then subtract in the same currency: $£400 \times 1.15 = €460$, and $€460 - €322 = €138$.

data-interpretation-s07-q08: Multiply each line's rate by its own running time before adding: $(60 \times 6) + (45 \times 8) = 360 + 360 = 720$ units.

data-interpretation-s07-q09: Price the items separately ($\pounds 8.95 + \pounds 3.05 + \pounds 1.80 = \pounds 13.80$), then subtract the deal price: $\pounds 13.80 - \pounds 12.50 = \pounds 1.30$.

data-interpretation-s07-q10: Combine the fixed and variable charges: $(2 \times \pounds 45) + (250 \times \pounds 0.22) = \pounds 90 + \pounds 55 = \pounds 145$.

data-interpretation-s08-q01: Divide the change by the original value: $\pounds 18,000 \div \pounds 180,000 = 0.10$, a 10% increase.

data-interpretation-s08-q02: The fall of 3,750 is measured against the starting figure: $3,750 \div 25,000 = 15\%$.

data-interpretation-s08-q03: An index of 130 against a base of 100 means multiplying by 1.30: $\pounds 46 \times 1.30 = \pounds 59.80$.

data-interpretation-s08-q04: Equal percentage rises and falls do not cancel because they act on different bases: $1.20 \times 0.80 = 0.96$, which is 4% below the start.

data-interpretation-s08-q05: Use the original figure as the base, not the new one: $2,000 \div 8,000 = 25\%$.

data-interpretation-s08-q06: The sale price is 70% of the original, so divide rather than add 30% back on: $\pounds 42 \div 0.70 = \pounds 60$.

data-interpretation-s08-q07: Between two index readings, the base is the earlier reading, not 100: $(121 - 110) \div 110 = 10\%$.

data-interpretation-s08-q08: The growth of 16,000 is divided by the starting population: $16,000 \div 64,000 = 25\%$.

data-interpretation-s08-q09: This year is 120% of last year, so divide by 1.20: $\pounds 2.4\text{m} \div 1.2 = \pounds 2.0\text{m}$, subtracting 20% of $\pounds 2.4\text{m}$ would use the wrong base.

data-interpretation-s08-q10: A 12% fall leaves 88% of the original: $4,500 \times 0.88 = 3,960$ kWh.

data-interpretation-s09-q01: Multiply each day's visitors by its own rate before comparing: Monday $400 \times 10\% = 40$ and Tuesday $500 \times 8\% = 40$, the same.

data-interpretation-s09-q02: Revenue joins the two sources by multiplication: $240 \text{ units} \times \pounds 12.50 = \pounds 3,000$.

data-interpretation-s09-q03: Raw membership counts mislead when populations differ: compute each rate: North $2,500/50,000 = 5\%$ beats South's $3,200/80,000 = 4\%$.

data-interpretation-s09-q04: Chain the times step by step: $10:40 + 1:35 = 12:15$ arrival, and adding the 20-minute wait gives 12:35.

data-interpretation-s09-q05: Combine the capacity first ($2 \times 30 = 60$ hours per week), then divide the workload: $180 \div 60 = 3$ weeks.

data-interpretation-s09-q06: Apply the unsold rate from one chart to the volume from the other: 95% of 320 = 304 loaves sold.

data-interpretation-s09-q07: Take 15% of the reference price and subtract it: $\pounds 600 - \pounds 90 = \pounds 510$.

data-interpretation-s09-q08: Multiply each result count by its points value and sum: $(6 \times 3) + (2 \times 1) + (2 \times 0) = 20$ points.

data-interpretation-s09-q09: The irrigation requirement is the gap between need and supply: $90 - 60 = 30$ mm.

data-interpretation-s09-q10: Convert each percentage to a count before adding, $580 + 310 = 890$, because percentages from different sample sizes cannot be added directly.

data-interpretation-s10-q01: The table establishes only that the two series moved oppositely; causation, forecasts, and per-employee productivity all require information the table does not contain.

data-interpretation-s10-q02: Only the direct restatement of a figure is safe: doubling means injuries rose.

Linking the two statistics causally, or inferring who was injured, goes beyond the chart.

data-interpretation-s10-q03: The problem is selection bias: people sampled at a gym are far more likely to exercise than the general adult population, whatever the sample size.

data-interpretation-s10-q04: With unequal group sizes, compare rates, not raw counts: $60/400 = 15\%$ against $10/100 = 10\%$. The sixfold count difference mostly reflects the fourfold group-size difference.

data-interpretation-s10-q05: An average summarises the whole distribution: some prices may have fallen while larger rises elsewhere pulled the mean up, so no claim about every house follows.

data-interpretation-s10-q06: When two series move together, consider a common cause before assuming one drives the other, hot weather plausibly increases both swimming and ice-cream sales.

data-interpretation-s10-q07: A truncated axis exaggerates small gaps, so read the actual values instead of the bar heights: 98 versus 94 is a difference of only four points.

data-interpretation-s10-q08: An overall rate must weight each group by its size: $(18,200 + 1,900) \div 22,000 = 91.4\%$. Averaging the two percentages ignores that weekday services outnumber weekend ones tenfold.

data-interpretation-s10-q09: Observational data shows association only: either variable could influence the other, or something else could influence both, so only the association itself is a safe conclusion.

data-interpretation-s10-q10: Without a controlled comparison, only the descriptive before-and-after change is defensible; causes, preferences, and forecasts would each need evidence the dashboard does not provide.

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