



S09-30min Combined Mean: 30-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** The mean height of 5 plants in tray A is 18 cm. The mean height of 5 plants in tray B is 24 cm.

Work out the combined mean height of all 10 plants.

(Total for Question 1 is 2 marks)

- 2** Group A has 4 members with a mean score of 15. Group B has 6 members with a mean score of 15. Write down the combined mean score of all 10 members, without calculating.

(Total for Question 2 is 1 mark)

- 3** The mean number of goals scored by 9 players in a football squad is 5. A new player joins the squad having scored 15 goals this season.

Work out the new mean number of goals scored per player, for all 10 players.

(Total for Question 3 is 3 marks)

- 4** A bakery sells loaves at two branches on Saturday.

Branch 1: 12 loaves sold, mean price £2.40 each.

Branch 2: 8 loaves sold, mean price £3.15 each.

Work out the combined mean price of all 20 loaves sold.

(Total for Question 4 is 3 marks)

- 5** A shop sells two brands of tea. Brand A: 40 boxes sold, mean price £3.20 per box. Brand B: 25 boxes sold, mean price £4.00 per box. Work out the combined mean price per box for all 65 boxes sold.

(Total for Question 5 is 2 marks)

- 6** Two youth clubs recorded the mean number of hours volunteered last month. Club 1: 10 members, mean 6 hours. Club 2: 15 members, mean 8 hours. Work out the combined mean number of hours volunteered across both clubs.

(Total for Question 6 is 2 marks)

- 7** The mean height of 6 plants in Tray A is 20 cm. The mean height of 9 plants in Tray B is 25 cm. Work out the combined mean height of all 15 plants.

(Total for Question 7 is 2 marks)

- 8** The mean number of goals scored by 10 players in a hockey squad is 4. A new player joins the squad having scored 15 goals so far this season. Work out the new mean number of goals for all 11 players.

(Total for Question 8 is 2 marks)

- 9** The mean mass of 9 boxes is 6 kg. A 10th box is added and the mean mass of all 10 boxes becomes 6.8 kg. Work out the mass of the 10th box.

(Total for Question 9 is 2 marks)

- 10** The mean weekly wage of 12 employees in a small office is £480. The manager, whose wage is £660, then leaves the company.

Work out the mean weekly wage of the remaining 11 employees.

(Total for Question 10 is 4 marks)

- 11** The mean mass of 11 parcels is 4 kg. A 12th parcel is added and the mean mass of all 12 parcels becomes 4.5 kg.

Work out the mass of the 12th parcel.

(Total for Question 11 is 4 marks)

12 Three classes sit the same maths test.

Class X: 25 pupils, mean score 62.

Class Y: 20 pupils, mean score 70.

Class Z: 15 pupils, mean score 58.

Work out the combined mean score of all 60 pupils.

(Total for Question 12 is 5 marks)

Mark scheme · S09-30min Combined Mean: 30-minute Pack

Question 1

- **M1** $(5 \times 18 + 5 \times 24) / 10$, oe
- **A1** 21 cm cao
- **Answer: 21 cm**

Question 2

- **B1** 15 cao
- **Answer: 15**

Question 3

- **M1** 9×5 (= 45), oe (original total goals)
- **M1** $(45 + 15) / 10$ (dep on M1)
- **A1** 6 cao
- **Answer: 6**

Question 4

- **M1** $12 \times 2.40 + 8 \times 3.15$ (= 54.00), oe (total takings for all 20 loaves)
- **M1** $54.00 / 20$ (dep on M1)
- **A1** £2.70 cao
- **Answer: £2.70**

Question 5

- **M1** correct method, $((40 \times 3.20) + (25 \times 4.00)) / 65$
- **A1** 3.51 (2 dp) cao
- **Answer: £3.51 (2 dp)**

Question 6

- **M1** correct method, $((10 \times 6) + (15 \times 8)) / 25$
- **A1** 7.2 cao
- **Answer: 7.2**

Question 7

- **M1** correct method, $((6 \times 20) + (9 \times 25)) / 15$
- **A1** 23 cao
- **Answer: 23**

Question 8

- **M1** correct method, $((10 \times 4) + 15) / 11$
- **A1** 5 cao
- **Answer: 5**

Question 9

- **M1** correct method, $(6.8 \times 10) - (6 \times 9)$
- **A1** 14 kg cao
- **Answer: 14 kg**

Question 10

- **M1** 12×480 (= 5760), oe
- **M1** $5760 - 660$ (= 5100), oe (dep)
- **M1** $5100 / 11$ (dep)
- **A1** awrt £463.64 cao
- **Answer: awrt £463.64**

Question 11

- **M1** 11×4 (= 44), oe (original total mass)
- **M1** 12×4.5 (= 54), oe (new total mass)
- **M1** $54 - 44$ (dep on both previous method marks)
- **A1** 10 kg cao
- **Answer: 10 kg**

Question 12

- **M1** 25×62 (= 1550), oe
- **M1** 20×70 (= 1400), oe
- **M1** 15×58 (= 870), oe
- **M1** $(1550 + 1400 + 870) / 60$ (dep on previous three method marks)
- **A1** awrt 63.7 cao
- **Answer: awrt 63.7**