2.97 Reading Scales and Measuring Instruments: Test Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A short ruler shows a mark labelled 0 cm at one end and a mark labelled 4 cm further along. There are 8 equal small divisions between the 0 cm and 4 cm marks. What length does one small division represent?

- ☐ A) 0.25 cm
- ☐ B) 0.5 cm
- ☐ C) 0.4 cm
- ☐ D) 2 mm
- ☐ E) 1 cm

---

2 The scale on a measuring jug has a mark every 20 ml. The pointer is 3 marks above the 160 ml mark. What does it show?

- ☐ A) 220 ml
- ☐ B) 190 ml
- ☐ C) 163 ml
- ☐ D) 280 ml
- ☐ E) 100 ml

---

3 The scale on a bathroom scale has a mark every 5 kg. The pointer is 2 marks above the 70 kg mark. What does it show?

- ☐ A) 72 kg
- ☐ B) 80 kg
- ☐ C) 90 kg
- ☐ D) 60 kg
- ☐ E) 79 kg

© Revision Library | revisionlibrary.co.uk

4 The scale on a kitchen scale has a mark every 5 g. The pointer is 3 marks above the 180 g mark. What does it show?

- [ ] A) 200 g
- [ ] B) 183 g
- [ ] C) 210 g
- [ ] D) 194 g
- [ ] E) 195 g

---

5 The scale on a kitchen scale has a mark every 10 g. The pointer is 3 marks above the 400 g mark. What does it show?

- [ ] A) 429 g
- [ ] B) 403 g
- [ ] C) 460 g
- [ ] D) 431 g
- [ ] E) 430 g

---

6 The pointer on a ruler is exactly halfway between the 500 cm mark and the 550 cm mark. What reading does it show?

- [ ] A) 525 cm
- [ ] B) 512 cm
- [ ] C) 550 cm
- [ ] D) 25 cm
- [ ] E) 500 cm

---

7 The scale on a measuring jug has a mark every 10 ml. The pointer is 3 marks above the 300 ml mark. What does it show?

- [ ] A) 360 ml
- [ ] B) 270 ml
- [ ] C) 329 ml
- [ ] D) 303 ml
- [ ] E) 330 ml

© Revision Library | revisionlibrary.co.uk

8 The scale on a ruler has a mark every 50 cm. The pointer is 2 marks above the 600 cm mark. What does it show?

- [ ] A) 602 cm
- [ ] B) 701 cm
- [ ] C) 700 cm
- [ ] D) 750 cm
- [ ] E) 800 cm

---

9 The scale on a ruler has a mark every 5 cm. The pointer is 1 mark above the 100 cm mark. What does it show?

- [ ] A) 105 cm
- [ ] B) 110 cm
- [ ] C) 104 cm
- [ ] D) 106 cm
- [ ] E) 101 cm

---

10 The scale on a bathroom scale has a mark every 10 kg. The pointer is 3 marks above the 80 kg mark. What does it show?

- [ ] A) 110 kg
- [ ] B) 109 kg
- [ ] C) 83 kg
- [ ] D) 140 kg
- [ ] E) 120 kg

---

11 The pointer on a kitchen scale is exactly halfway between the 60 g mark and the 70 g mark. What reading does it show?

- [ ] A) 65 g
- [ ] B) 60 g
- [ ] C) 5 g
- [ ] D) 70 g
- [ ] E) 62 g

© Revision Library | revisionlibrary.co.uk

12 The pointer on a bathroom scale is exactly halfway between the 160 kg mark and the 180 kg mark. What reading does it show?

- [ ] A) 180 kg
- [ ] B) 160 kg
- [ ] C) 340 kg
- [ ] D) 171 kg
- [ ] E) 170 kg

---

13 The scale on a kitchen scale has a mark every 25 g. The pointer is 3 marks above the 750 g mark. What does it show?

- [ ] A) 900 g
- [ ] B) 753 g
- [ ] C) 826 g
- [ ] D) 825 g
- [ ] E) 824 g

---

14 The scale on a bathroom scale has a mark every 2 kg. The pointer is 1 mark above the 8 kg mark. What does it show?

- [ ] A) 9 kg
- [ ] B) 11 kg
- [ ] C) 10 kg
- [ ] D) 12 kg
- [ ] E) 6 kg

---

15 The scale on a kitchen scale has a mark every 5 g. The pointer is 4 marks above the 85 g mark. What does it show?

- [ ] A) 89 g
- [ ] B) 106 g
- [ ] C) 105 g
- [ ] D) 125 g
- [ ] E) 110 g

© Revision Library | revisionlibrary.co.uk

16 The pointer on a kitchen scale is exactly halfway between the 150 g mark and the 160 g mark. What reading does it show?

- ☐ A) 154 g
- ☐ B) 150 g
- ☐ C) 155 g
- ☐ D) 310 g
- ☐ E) 160 g

---

17 A measuring cylinder is labelled 0 mL and 150 mL with 5 equal divisions between. Sam fills to the 2nd division, then adds one third of the cylinder's full capacity, and finally pours out 20 mL. Work out the final volume remaining in the cylinder.

(6)

© Revision Library | revisionlibrary.co.uk

18 A weighbridge gauge shows marks labelled 2.0 tonnes and 5.0 tonnes with 6 equal divisions between.

(a) Calculate the value of one small division. **(2)**

.....

(b) A truck registers at the 4th division above 2.0 tonnes. What is that reading? **(2)**

.....

(c) Another vehicle's reading is twice the first truck's reading minus 0.5 tonnes. What is the second vehicle's reading? **(2)**

.....

---

19 A carpenter uses two rulers. Ruler A shows 0 cm and 50 cm with 10 equal divisions between. Ruler B shows 0 cm and 1 m with 8 equal divisions between. He measures a board as the 6th division on Ruler A and the 4th division on Ruler B. Work out the total length of the board in centimetres.

(5)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 2.97 Reading Scales and Measuring Instruments: Test Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

correct option B (0.5 cm) cao **B1**

Answer: B) 0.5 cm (each division = 4 / 8 = 0.5 cm = 5 mm).

Question 2

correct option A (220 ml) cao **B1**

Answer: A) 220 ml

Question 3

correct option B (80 kg) cao **B1**

Answer: B) 80 kg

Question 4

correct option E (195 g) cao **B1**

Answer: E) 195 g

Question 5

correct option E (430 g) cao **B1**

Answer: E) 430 g

Question 6

correct option A (525 cm) cao **B1**

Answer: A) 525 cm

Question 7

correct option E (330 ml) cao **B1**

Answer: E) 330 ml

Question 8

correct option C (700 cm) cao **B1**

Answer: C) 700 cm

Question 9

correct option A (105 cm) cao **B1**

Answer: A) 105 cm

Question 10

correct option A (110 kg) cao **B1**

Answer: A) 110 kg

Question 11

correct option A (65 g) cao **B1**

Answer: A) 65 g

Question 12

correct option E (170 kg) cao **B1**

Answer: E) 170 kg

Question 13

correct option D (825 g) cao **B1**

Answer: D) 825 g

Question 14

correct option C (10 kg) cao **B1**

Answer: C) 10 kg

Question 15

correct option C (105 g) cao **B1**

Answer: C) 105 g

Question 16

correct option C (155 g) cao **B1**

Answer: C) 155 g

Question 17

150 / 5 (= 30) seen for one division **M1**

2nd division identified as 2 x 30 = 60 mL **M1**

one third of full capacity = 150 / 3 = 50 mL seen **M1**

addition 60 + 50 = 110 mL seen ft **dM1**

20 mL subtraction from 110 seen **M1**

final answer 90 mL cao **A1**

Answer: 90 mL

Question 18

(a) (5.0 - 2.0) / 6 (= 0.5) seen **M1**

(a) 0.5 tonnes cao **A1**

(a) Answer: 0.5 tonnes

(b) 4 x 0.5 (= 2.0) seen **M1**

(b) 4.0 tonnes cao **A1**

(b) Answer: 4.0 tonnes

(c) 2 x 4.0 (= 8.0) and subtraction of 0.5 seen **M1**

(c) 7.5 tonnes cao **A1**

(c) Answer: 7.5 tonnes

Question 19

Ruler A division 50 / 10 = 5 cm seen **M1**

Ruler A measurement 6 x 5 = 30 cm seen **M1**

Ruler B division 100 / 8 = 12.5 cm seen **M1**

Ruler B measurement 4 x 12.5 = 50 cm seen **M1**

Total 80 cm cao **A1**

Answer: 80 cm

© Revision Library | revisionlibrary.co.uk