2.99 Distance, Speed and Time Problems: 30-minute 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 train covers 24 km in 36 minutes. What is its average speed in km/h?

- ☐ A) 1.5 km/h
- ☐ B) 41 km/h
- ☐ C) 60 km/h
- ☐ D) 14.4 km/h
- ☐ E) 40 km/h

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2 Ffion drives 200 km at 50 km/h and then 240 km at 60 km/h. What is Ffion's average speed for the whole journey, in km/h?

- ☐ A) 110 km/h
- ☐ B) 54 km/h
- ☐ C) 55 km/h
- ☐ D) 56 km/h
- ☐ E) 220 km/h

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3 A runner travels 2 km at an average speed of 8 km/h. How long does the journey take?

- ☐ A) 4 hours
- ☐ B) 15 minutes
- ☐ C) 16 minutes
- ☐ D) 25 minutes
- ☐ E) 1 hour 15 minutes

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4 Ravi drives 108 km at 36 km/h and then 72 km at 24 km/h. What is Ravi's average speed for the whole journey, in km/h?

- [ ] A) 29 km/h
- [ ] B) 60 km/h
- [ ] C) 180 km/h
- [ ] D) 90 km/h
- [ ] E) 30 km/h

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5 A coach travels at an average speed of 45 km/h for 20 minutes. How far does it travel?

- [ ] A) 135 km
- [ ] B) 900 km
- [ ] C) 65 km
- [ ] D) 15 km
- [ ] E) 45 km

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6 Amara drives 72 km at 72 km/h and then 200 km at 50 km/h. What is Amara's average speed for the whole journey, in km/h?

- [ ] A) 54.4 km/h
- [ ] B) 53.4 km/h
- [ ] C) 55.4 km/h
- [ ] D) 61 km/h
- [ ] E) 136 km/h

---

7 A coach travels 30 km at an average speed of 24 km/h. How long does the journey take?

- [ ] A) 2 hours 15 minutes
- [ ] B) 1 hour
- [ ] C) 12 hours
- [ ] D) 1 hour 15 minutes
- [ ] E) 1 hour 25 minutes

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8 A walker travels 9 km at an average speed of 6 km/h. How long does the journey take?

- [ ] A) 1 hour 30 minutes
- [ ] B) 1 hour 50 minutes
- [ ] C) 40 minutes
- [ ] D) 54 minutes
- [ ] E) 1 hour 15 minutes

---

9 Jack drives 72 km at 36 km/h and then 144 km at 72 km/h. What is Jack's average speed for the whole journey, in km/h?

- [ ] A) 53 km/h
- [ ] B) 55 km/h
- [ ] C) 108 km/h
- [ ] D) 216 km/h
- [ ] E) 54 km/h

---

10 A train travels at an average speed of 20 km/h for 45 minutes. How far does it travel?

- [ ] A) 20 km
- [ ] B) 9 km
- [ ] C) 15 km
- [ ] D) 14 km
- [ ] E) 900 km

---

11 A walker travels at an average speed of 8 km/h for 1 hour 30 minutes. How far does it travel?

- [ ] A) 98 km
- [ ] B) 720 km
- [ ] C) 13 km
- [ ] D) 8 km
- [ ] E) 12 km

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12 Sana drives 72 km at 36 km/h and then 270 km at 90 km/h. What is Sana's average speed for the whole journey, in km/h?

- [ ] A) 171 km/h
- [ ] B) 67.4 km/h
- [ ] C) 68.4 km/h
- [ ] D) 63 km/h
- [ ] E) 342 km/h

---

13 Anya drives 36 km at 36 km/h and then 30 km at 30 km/h. What is Anya's average speed for the whole journey, in km/h?

- [ ] A) 3.3 km/h
- [ ] B) 66 km/h
- [ ] C) 32 km/h
- [ ] D) 33 km/h
- [ ] E) 34 km/h

---

14 A coach travels at an average speed of 36 km/h for 45 minutes. How far does it travel?

- [ ] A) 81 km
- [ ] B) 27 km
- [ ] C) 1,620 km
- [ ] D) 36 km
- [ ] E) 48 km

---

15 Noah drives 72 km at 24 km/h and then 50 km at 50 km/h. What is Noah's average speed for the whole journey, in km/h?

- [ ] A) 37 km/h
- [ ] B) 122 km/h
- [ ] C) 30.5 km/h
- [ ] D) 61 km/h
- [ ] E) 31.5 km/h

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16 A train covers 20 km in 15 minutes. What is its average speed in km/h?

- [ ] A) 5 km/h
- [ ] B) 0.75 km/h
- [ ] C) 35 km/h
- [ ] D) 79 km/h
- [ ] E) 80 km/h

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17 Aisha drives 40 km at 20 km/h and then 72 km at 36 km/h. What is Aisha's average speed for the whole journey, in km/h?

- [ ] A) 28 km/h
- [ ] B) 29 km/h
- [ ] C) 56 km/h
- [ ] D) 112 km/h
- [ ] E) 27 km/h

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18 A walker travels 3 km at an average speed of 5 km/h. How long does the journey take?

- [ ] A) 1 hour
- [ ] B) 15 minutes
- [ ] C) 21 minutes
- [ ] D) 36 minutes
- [ ] E) 1 hour 36 minutes

---

19 Mei drives 20 km at 20 km/h and then 80 km at 80 km/h. What is Mei's average speed for the whole journey, in km/h?

- [ ] A) 5 km/h
- [ ] B) 49 km/h
- [ ] C) 51 km/h
- [ ] D) 50 km/h
- [ ] E) 100 km/h

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20 A cyclist travels 180 km at an average speed of 90 km/h. How long does the journey take?

- [ ] A) 30 minutes
- [ ] B) 2 hours
- [ ] C) 1 hour 45 minutes
- [ ] D) 270 hours
- [ ] E) 3 hours

---

21 Maya drives 160 km at 80 km/h and then 270 km at 90 km/h. What is Maya's average speed for the whole journey, in km/h?

- [ ] A) 215 km/h
- [ ] B) 85 km/h
- [ ] C) 86 km/h
- [ ] D) 430 km/h
- [ ] E) 87 km/h

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22 A coach travels at an average speed of 15 km/h for 3 hours. How far does it travel?

- [ ] A) 27 km
- [ ] B) 195 km
- [ ] C) 2,700 km
- [ ] D) 5 km
- [ ] E) 45 km

---

23 A walker travels at an average speed of 6 km/h for 20 minutes. How far does it travel?

- [ ] A) 6 km
- [ ] B) 1.2 km
- [ ] C) 2 km
- [ ] D) 120 km
- [ ] E) 26 km

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24 Ethan drives 48 km at 12 km/h and then 15 km at 15 km/h. What is Ethan's average speed for the whole journey, in km/h?

- [ ] A) 12.6 km/h
- [ ] B) 13.6 km/h
- [ ] C) 15.75 km/h
- [ ] D) 31.5 km/h
- [ ] E) 13.5 km/h

---

25 A walker travels at an average speed of 12 km/h for 15 minutes. How far does it travel?

- [ ] A) 180 km
- [ ] B) 3 km
- [ ] C) 4 km
- [ ] D) 12 km
- [ ] E) 1.8 km

---

26 A cyclist travels 27 km at an average speed of 45 km/h. How long does the journey take?

- [ ] A) 20 hours 15 minutes
- [ ] B) 1 hour 40 minutes
- [ ] C) 1 hour 36 minutes
- [ ] D) 36 minutes
- [ ] E) 1 hour

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27 Mei drives 12 km at 12 km/h and then 90 km at 30 km/h. What is Mei's average speed for the whole journey, in km/h?

- [ ] A) 21 km/h
- [ ] B) 25.5 km/h
- [ ] C) 51 km/h
- [ ] D) 24.5 km/h
- [ ] E) 102 km/h

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28 A drone travels 4,500 m at 5 m/s. Calculate how long this journey takes, giving your answer in minutes.

(2)

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29 A car drives 30 km at 60 km/h then continues for 70 km at 70 km/h. Calculate the average speed for the entire 100 km journey. Give your answer as a fraction or to 2 decimal places.

(3)

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Mark scheme · 2.99 Distance, Speed and Time Problems: 30-minute Pack

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

Question 1

correct option E (40 km/h) cao **B1**

Answer: E) 40 km/h

Question 2

correct option C (55 km/h) cao **B1**

Answer: C) 55 km/h

Question 3

correct option B (15 minutes) cao **B1**

Answer: B) 15 minutes

Question 4

correct option E (30 km/h) cao **B1**

Answer: E) 30 km/h

Question 5

correct option D (15 km) cao **B1**

Answer: D) 15 km

Question 6

correct option A (54.4 km/h) cao **B1**

Answer: A) 54.4 km/h

Question 7

correct option D (1 hour 15 minutes) cao **B1**

Answer: D) 1 hour 15 minutes

Question 8

correct option A (1 hour 30 minutes) cao **B1**

Answer: A) 1 hour 30 minutes

Question 9

correct option E (54 km/h) cao **B1**

Answer: E) 54 km/h

Question 10

correct option C (15 km) cao **B1**

Answer: C) 15 km

Question 11

correct option E (12 km) cao **B1**

Answer: E) 12 km

Question 12

correct option C (68.4 km/h) cao **B1**

Answer: C) 68.4 km/h

Question 13

correct option D (33 km/h) cao **B1**

Answer: D) 33 km/h

Question 14

correct option B (27 km) cao **B1**

Answer: B) 27 km

Question 15

correct option C (30.5 km/h) cao **B1**

Answer: C) 30.5 km/h

Question 16

correct option E (80 km/h) cao **B1**

Answer: E) 80 km/h

Question 17

correct option A (28 km/h) cao **B1**

Answer: A) 28 km/h

Question 18

correct option D (36 minutes) cao **B1**

Answer: D) 36 minutes

Question 19

correct option D (50 km/h) cao **B1**

Answer: D) 50 km/h

Question 20

correct option B (2 hours) cao **B1**

Answer: B) 2 hours

Question 21

correct option C (86 km/h) cao **B1**

Answer: C) 86 km/h

Question 22

correct option E (45 km) cao **B1**

Answer: E) 45 km

Question 23

correct option C (2 km) cao **B1**

Answer: C) 2 km

Question 24

correct option A (12.6 km/h) cao **B1**

Answer: A) 12.6 km/h

Question 25

correct option B (3 km) cao **B1**

Answer: B) 3 km

Question 26

correct option D (36 minutes) cao **B1**

Answer: D) 36 minutes

Question 27

correct option B (25.5 km/h) cao **B1**

Answer: B) 25.5 km/h

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Question 28

time = 4500/5 = 900 seconds or method converting units shown	**M1**
15 minutes cao	**A1**

Answer: 15 minutes

Question 29

time for first leg 30/60 = 0.5 h and second leg 70/70 = 1 h seen or equivalent	**M1**
total distance 100 km and total time 1.5 h or the expression 100/1.5 seen	**M1**
66 2/3 km/h or 66.67 km/h cao	**A1**

Answer: 66 2/3 km/h (66.67 km/h)

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