2.99 Distance, Speed and Time Problems: 1-hour Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A train travels 100 km at an average speed of 40 km/h. How long does the journey take?

- ☐ A) 66 hours 40 minutes
- ☐ B) 2 hours 50 minutes
- ☐ C) 3 hours 30 minutes
- ☐ D) 2 hours 30 minutes
- ☐ E) 24 minutes

---

2 Esme drives 60 km at 20 km/h and then 360 km at 90 km/h. What is Esme's average speed for the whole journey, in km/h?

- ☐ A) 105 km/h
- ☐ B) 210 km/h
- ☐ C) 55 km/h
- ☐ D) 61 km/h
- ☐ E) 60 km/h

---

3 A walker travels 4 km at an average speed of 12 km/h. How long does the journey take?

- ☐ A) 48 minutes
- ☐ B) 33 minutes
- ☐ C) 20 minutes
- ☐ D) 3 hours
- ☐ E) 1 hour 20 minutes

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

- [ ] A) 21 km/h
- [ ] B) 2.1 km/h
- [ ] C) 210 km/h
- [ ] D) 22 km/h
- [ ] E) 42 km/h

---

5 A cyclist travels 120 km at an average speed of 48 km/h. How long does the journey take?

- [ ] A) 3 hours 30 minutes
- [ ] B) 2 hours 30 minutes
- [ ] C) 96 hours
- [ ] D) 2 hours 15 minutes
- [ ] E) 2 hours 50 minutes

---

6 A coach covers 10 km in 40 minutes. What is its average speed in km/h?

- [ ] A) 4 km/h
- [ ] B) 25 km/h
- [ ] C) 15 km/h
- [ ] D) 0.25 km/h
- [ ] E) 14 km/h

---

7 Lily drives 36 km at 36 km/h and then 360 km at 90 km/h. What is Lily's average speed for the whole journey, in km/h?

- [ ] A) 63 km/h
- [ ] B) 80.2 km/h
- [ ] C) 198 km/h
- [ ] D) 79.2 km/h
- [ ] E) 396 km/h

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8 A runner travels 20 km at an average speed of 10 km/h. How long does the journey take?

- [ ] A) 2 hours
- [ ] B) 3 hours 20 minutes
- [ ] C) 1 hour 45 minutes
- [ ] D) 30 minutes
- [ ] E) 3 hours

---

9 Tom drives 180 km at 90 km/h and then 48 km at 24 km/h. What is Tom's average speed for the whole journey, in km/h?

- [ ] A) 114 km/h
- [ ] B) 56 km/h
- [ ] C) 228 km/h
- [ ] D) 57 km/h
- [ ] E) 58 km/h

---

10 A walker covers 24 km in 3 hours. What is its average speed in km/h?

- [ ] A) 8 km/h
- [ ] B) 72 km/h
- [ ] C) 7.5 km/h
- [ ] D) 9 km/h
- [ ] E) 204 km/h

---

11 Leo drives 135 km at 45 km/h and then 216 km at 72 km/h. What is Leo's average speed for the whole journey, in km/h?

- [ ] A) 57.5 km/h
- [ ] B) 117 km/h
- [ ] C) 58.5 km/h
- [ ] D) 59.5 km/h
- [ ] E) 175.5 km/h

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12 A cyclist covers 8 km in 40 minutes. What is its average speed in km/h?

- [ ] A) 0.2 km/h
- [ ] B) 12 km/h
- [ ] C) 13 km/h
- [ ] D) 20 km/h
- [ ] E) 5 km/h

---

13 A coach covers 21 km in 1 hour 45 minutes. What is its average speed in km/h?

- [ ] A) 36.75 km/h
- [ ] B) 12 km/h
- [ ] C) 20 km/h
- [ ] D) 0.2 km/h
- [ ] E) 126 km/h

---

14 Kwame drives 240 km at 80 km/h and then 24 km at 24 km/h. What is Kwame's average speed for the whole journey, in km/h?

- [ ] A) 88 km/h
- [ ] B) 132 km/h
- [ ] C) 65 km/h
- [ ] D) 52 km/h
- [ ] E) 66 km/h

---

15 A train covers 54 km in 45 minutes. What is its average speed in km/h?

- [ ] A) 71 km/h
- [ ] B) 120 km/h
- [ ] C) 72 km/h
- [ ] D) 1.2 km/h
- [ ] E) 73 km/h

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16 Megan drives 60 km at 15 km/h and then 180 km at 45 km/h. What is Megan's average speed for the whole journey, in km/h?

- [ ] A) 31 km/h
- [ ] B) 60 km/h
- [ ] C) 120 km/h
- [ ] D) 30 km/h
- [ ] E) 240 km/h

---

17 A runner travels at an average speed of 4 km/h for 15 minutes. How far does it travel?

- [ ] A) 1 km
- [ ] B) 60 km
- [ ] C) 19 km
- [ ] D) 4 km
- [ ] E) 16 km

---

18 Niamh drives 60 km at 60 km/h and then 30 km at 30 km/h. What is Niamh's average speed for the whole journey, in km/h?

- [ ] A) 44 km/h
- [ ] B) 4.5 km/h
- [ ] C) 90 km/h
- [ ] D) 46 km/h
- [ ] E) 45 km/h

---

19 A train travels at an average speed of 18 km/h for 1 hour. How far does it travel?

- [ ] A) 1,080 km
- [ ] B) 10.8 km
- [ ] C) 19 km
- [ ] D) 18 km
- [ ] E) 17 km

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20 A coach covers 48 km in 36 minutes. What is its average speed in km/h?

- [ ] A) 80 km/h
- [ ] B) 0.75 km/h
- [ ] C) 28.8 km/h
- [ ] D) 81 km/h
- [ ] E) 84 km/h

---

21 Ravi drives 72 km at 24 km/h and then 24 km at 12 km/h. What is Ravi's average speed for the whole journey, in km/h?

- [ ] A) 18.2 km/h
- [ ] B) 19.2 km/h
- [ ] C) 18 km/h
- [ ] D) 32 km/h
- [ ] E) 48 km/h

---

22 A train travels 18 km at an average speed of 12 km/h. How long does the journey take?

- [ ] A) 1 hour 30 minutes
- [ ] B) 3 hours 36 minutes
- [ ] C) 2 hours 30 minutes
- [ ] D) 40 minutes
- [ ] E) 1 hour 50 minutes

---

23 A coach travels 2 km at an average speed of 6 km/h. How long does the journey take?

- [ ] A) 33 minutes
- [ ] B) 1 hour 20 minutes
- [ ] C) 5 minutes
- [ ] D) 20 minutes
- [ ] E) 12 minutes

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24 Poppy drives 180 km at 90 km/h and then 288 km at 72 km/h. What is Poppy's average speed for the whole journey, in km/h?

- [ ] A) 117 km/h
- [ ] B) 78 km/h
- [ ] C) 81 km/h
- [ ] D) 234 km/h
- [ ] E) 79 km/h

---

25 A train travels 10 km at an average speed of 8 km/h. How long does the journey take?

- [ ] A) 1 hour 20 minutes
- [ ] B) 2 hours 15 minutes
- [ ] C) 1 hour 15 minutes
- [ ] D) 48 minutes
- [ ] E) 1 hour 25 minutes

---

26 A coach covers 96 km in 2 hours. What is its average speed in km/h?

- [ ] A) 49 km/h
- [ ] B) 80 km/h
- [ ] C) 0.8 km/h
- [ ] D) 1.25 km/h
- [ ] E) 48 km/h

---

27 Mei drives 180 km at 90 km/h and then 120 km at 40 km/h. What is Mei's average speed for the whole journey, in km/h?

- [ ] A) 300 km/h
- [ ] B) 61 km/h
- [ ] C) 150 km/h
- [ ] D) 60 km/h
- [ ] E) 65 km/h

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28 A coach covers 36 km in 1 hour 30 minutes. What is its average speed in km/h?

- [ ] A) 0.4 km/h
- [ ] B) 40 km/h
- [ ] C) 24 km/h
- [ ] D) 54 km/h
- [ ] E) 2.5 km/h

---

29 Tom drives 108 km at 36 km/h and then 12 km at 12 km/h. What is Tom's average speed for the whole journey, in km/h?

- [ ] A) 120 km/h
- [ ] B) 30 km/h
- [ ] C) 31 km/h
- [ ] D) 24 km/h
- [ ] E) 60 km/h

---

30 A cyclist covers 12 km in 1 hour 30 minutes. What is its average speed in km/h?

- [ ] A) 7.5 km/h
- [ ] B) 102 km/h
- [ ] C) 7 km/h
- [ ] D) 8 km/h
- [ ] E) 18 km/h

---

31 Niamh drives 144 km at 36 km/h and then 80 km at 80 km/h. What is Niamh's average speed for the whole journey, in km/h?

- [ ] A) 112 km/h
- [ ] B) 45.8 km/h
- [ ] C) 58 km/h
- [ ] D) 56 km/h
- [ ] E) 44.8 km/h

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32 Imogen drives 30 km at 30 km/h and then 180 km at 60 km/h. What is Imogen's average speed for the whole journey, in km/h?

- [ ] A) 45 km/h
- [ ] B) 52.5 km/h
- [ ] C) 105 km/h
- [ ] D) 210 km/h
- [ ] E) 51.5 km/h

---

33 A runner travels at an average speed of 6 km/h for 40 minutes. How far does it travel?

- [ ] A) 4 km
- [ ] B) 2.4 km
- [ ] C) 3 km
- [ ] D) 240 km
- [ ] E) 6 km

---

34 Megan drives 20 km at 20 km/h and then 24 km at 24 km/h. What is Megan's average speed for the whole journey, in km/h?

- [ ] A) 2.2 km/h
- [ ] B) 21 km/h
- [ ] C) 44 km/h
- [ ] D) 22 km/h
- [ ] E) 23 km/h

---

35 Ethan drives 216 km at 72 km/h and then 72 km at 36 km/h. What is Ethan's average speed for the whole journey, in km/h?

- [ ] A) 96 km/h
- [ ] B) 288 km/h
- [ ] C) 144 km/h
- [ ] D) 54 km/h
- [ ] E) 57.6 km/h

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36 A runner travels 25 km at an average speed of 10 km/h. How long does the journey take?

- [ ] A) 24 minutes
- [ ] B) 2 hours 30 minutes
- [ ] C) 4 hours 10 minutes
- [ ] D) 2 hours 50 minutes
- [ ] E) 2 hours 15 minutes

---

37 Sana drives 80 km at 20 km/h and then 160 km at 80 km/h. What is Sana's average speed for the whole journey, in km/h?

- [ ] A) 50 km/h
- [ ] B) 60 km/h
- [ ] C) 40 km/h
- [ ] D) 39 km/h
- [ ] E) 120 km/h

---

38 Ffion drives 160 km at 40 km/h and then 15 km at 15 km/h. What is Ffion's average speed for the whole journey, in km/h?

- [ ] A) 43.75 km/h
- [ ] B) 35 km/h
- [ ] C) 27.5 km/h
- [ ] D) 87.5 km/h
- [ ] E) 175 km/h

---

39 A runner travels at an average speed of 4 km/h for 1 hour 30 minutes. How far does it travel?

- [ ] A) 6 km
- [ ] B) 94 km
- [ ] C) 4 km
- [ ] D) 360 km
- [ ] E) 7 km

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40 Tom drives 40 km at 20 km/h and then 80 km at 40 km/h. What is Tom's average speed for the whole journey, in km/h?

- [ ] A) 29 km/h
- [ ] B) 31 km/h
- [ ] C) 60 km/h
- [ ] D) 30 km/h
- [ ] E) 120 km/h

---

41 A cyclist travels at an average speed of 90 km/h for 20 minutes. How far does it travel?

- [ ] A) 270 km
- [ ] B) 18 km
- [ ] C) 30 km
- [ ] D) 90 km
- [ ] E) 1,800 km

---

42 Ffion drives 320 km at 80 km/h and then 50 km at 50 km/h. What is Ffion's average speed for the whole journey, in km/h?

- [ ] A) 65 km/h
- [ ] B) 370 km/h
- [ ] C) 92.5 km/h
- [ ] D) 74 km/h
- [ ] E) 185 km/h

---

43 Niamh drives 108 km at 36 km/h and then 120 km at 40 km/h. What is Niamh's average speed for the whole journey, in km/h?

- [ ] A) 76 km/h
- [ ] B) 38 km/h
- [ ] C) 114 km/h
- [ ] D) 228 km/h
- [ ] E) 37 km/h

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44 A coach covers 20 km in 1 hour. What is its average speed in km/h?

- [ ] A) 21 km/h
- [ ] B) 80 km/h
- [ ] C) 3 km/h
- [ ] D) 19 km/h
- [ ] E) 20 km/h

---

45 A coach travels at an average speed of 20 km/h for 15 minutes. How far does it travel?

- [ ] A) 6 km
- [ ] B) 20 km
- [ ] C) 5 km
- [ ] D) 35 km
- [ ] E) 300 km

---

46 Lily drives 72 km at 72 km/h and then 160 km at 40 km/h. What is Lily's average speed for the whole journey, in km/h?

- [ ] A) 116 km/h
- [ ] B) 46.4 km/h
- [ ] C) 56 km/h
- [ ] D) 47.4 km/h
- [ ] E) 232 km/h

---

47 A coach travels at an average speed of 40 km/h for 3 hours. How far does it travel?

- [ ] A) 220 km
- [ ] B) 121 km
- [ ] C) 120 km
- [ ] D) 72 km
- [ ] E) 7,200 km

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48 A train covers 4 km in 30 minutes. What is its average speed in km/h?

- [ ] A) 8 km/h
- [ ] B) 9 km/h
- [ ] C) 34 km/h
- [ ] D) 7.5 km/h
- [ ] E) 2 km/h

---

49 Yusuf drives 144 km at 36 km/h and then 12 km at 12 km/h. What is Yusuf's average speed for the whole journey, in km/h?

- [ ] A) 39 km/h
- [ ] B) 24 km/h
- [ ] C) 78 km/h
- [ ] D) 31.2 km/h
- [ ] E) 32.2 km/h

---

50 A coach covers 60 km in 1 hour 15 minutes. What is its average speed in km/h?

- [ ] A) 135 km/h
- [ ] B) 48 km/h
- [ ] C) 0.8 km/h
- [ ] D) 47 km/h
- [ ] E) 80 km/h

---

51 A lorry covers 90 km in 1.5 hours. Work out its average speed in km/h.

(1)

---

52 A runner travels at an average speed of 8 km/h for 15 minutes. How far does it travel?

- [ ] A) 2 km
- [ ] B) 32 km
- [ ] C) 8 km
- [ ] D) 120 km
- [ ] E) 1.2 km

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53 A coach travels at an average speed of 24 km/h for 1 hour 30 minutes. How far does it travel?

- [ ] A) 24 km
- [ ] B) 2,160 km
- [ ] C) 36 km
- [ ] D) 21.6 km
- [ ] E) 16 km

---

54 Sana drives 80 km at 80 km/h and then 144 km at 36 km/h. What is Sana's average speed for the whole journey, in km/h?

- [ ] A) 44.8 km/h
- [ ] B) 58 km/h
- [ ] C) 43.8 km/h
- [ ] D) 56 km/h
- [ ] E) 112 km/h

---

55 A train travels 84 km at an average speed of 48 km/h. How long does the journey take?

- [ ] A) 2 hours 45 minutes
- [ ] B) 1 hour 45 minutes
- [ ] C) 67 hours 12 minutes
- [ ] D) 1 hour 30 minutes
- [ ] E) 2 hours 15 minutes

---

56 Jack drives 72 km at 72 km/h and then 240 km at 60 km/h. What is Jack's average speed for the whole journey, in km/h?

- [ ] A) 156 km/h
- [ ] B) 78 km/h
- [ ] C) 66 km/h
- [ ] D) 62.4 km/h
- [ ] E) 63.4 km/h

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57 A cyclist covers 8 km in 30 minutes. What is its average speed in km/h?

- [ ] A) 38 km/h
- [ ] B) 16 km/h
- [ ] C) 17 km/h
- [ ] D) 3.75 km/h
- [ ] E) 4 km/h

---

58 A train travels 15 km at an average speed of 60 km/h. How long does the journey take?

- [ ] A) 15 minutes
- [ ] B) 1 hour 15 minutes
- [ ] C) 15 hours
- [ ] D) 4 hours
- [ ] E) 25 minutes

---

59 Megan drives 48 km at 24 km/h and then 60 km at 20 km/h. What is Megan's average speed for the whole journey, in km/h?

- [ ] A) 54 km/h
- [ ] B) 108 km/h
- [ ] C) 22 km/h
- [ ] D) 21.6 km/h
- [ ] E) 36 km/h

---

60 A cyclist travels at an average speed of 24 km/h for 45 minutes. How far does it travel?

- [ ] A) 24 km
- [ ] B) 1,080 km
- [ ] C) 17 km
- [ ] D) 69 km
- [ ] E) 18 km

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61 Ewan drives 72 km at 24 km/h and then 60 km at 60 km/h. What is Ewan's average speed for the whole journey, in km/h?

- [ ] A) 132 km/h
- [ ] B) 66 km/h
- [ ] C) 33 km/h
- [ ] D) 42 km/h
- [ ] E) 34 km/h

---

62 Aisha drives 30 km at 15 km/h and then 40 km at 20 km/h. What is Aisha's average speed for the whole journey, in km/h?

- [ ] A) 35 km/h
- [ ] B) 70 km/h
- [ ] C) 18.5 km/h
- [ ] D) 16.5 km/h
- [ ] E) 17.5 km/h

---

63 A lorry overtakes a slower vehicle. The lorry travels at 50 km/h and the slower vehicle at 40 km/h. How long does it take the lorry to be 1 km ahead of the slower vehicle? Give your answer in minutes.

(2)

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Mark scheme · 2.99 Distance, Speed and Time Problems: 1-hour Pack

Question 1

correct option D (2 hours 30 minutes) cao **B1**

Answer: D) 2 hours 30 minutes

Question 2

correct option E (60 km/h) cao **B1**

Answer: E) 60 km/h

Question 3

correct option C (20 minutes) cao **B1**

Answer: C) 20 minutes

Question 4

correct option A (21 km/h) cao **B1**

Answer: A) 21 km/h

Question 5

correct option B (2 hours 30 minutes) cao **B1**

Answer: B) 2 hours 30 minutes

Question 6

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

Answer: C) 15 km/h

Question 7

correct option D (79.2 km/h) cao **B1**

Answer: D) 79.2 km/h

Question 8

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

Answer: A) 2 hours

Question 9

correct option D (57 km/h) cao **B1**

Answer: D) 57 km/h

Question 10

correct option A (8 km/h) cao **B1**

Answer: A) 8 km/h

Question 11

correct option C (58.5 km/h) cao **B1**

Answer: C) 58.5 km/h

Question 12

correct option B (12 km/h) cao **B1**

Answer: B) 12 km/h

Question 13

correct option B (12 km/h) cao **B1**

Answer: B) 12 km/h

Question 14

correct option E (66 km/h) cao **B1**

Answer: E) 66 km/h

Question 15

correct option C (72 km/h) cao **B1**

Answer: C) 72 km/h

Question 16

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

Answer: D) 30 km/h

Question 17

correct option A (1 km) cao **B1**

Answer: A) 1 km

Question 18

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

Answer: E) 45 km/h

Question 19

correct option D (18 km) cao **B1**

Answer: D) 18 km

Question 20

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

Answer: A) 80 km/h

Question 21

correct option B (19.2 km/h) cao **B1**

Answer: B) 19.2 km/h

Question 22

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

Answer: A) 1 hour 30 minutes

Question 23

correct option D (20 minutes) cao **B1**

Answer: D) 20 minutes

Question 24

correct option B (78 km/h) cao **B1**

Answer: B) 78 km/h

Question 25

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

Answer: C) 1 hour 15 minutes

Question 26

correct option E (48 km/h) cao **B1**

Answer: E) 48 km/h

Question 27

correct option D (60 km/h) cao **B1**

Answer: D) 60 km/h

Question 28

correct option C (24 km/h) cao **B1**

Answer: C) 24 km/h

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Question 29

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

Answer: B) 30 km/h

Question 30

correct option D (8 km/h) cao **B1**

Answer: D) 8 km/h

Question 31

correct option E (44.8 km/h) cao **B1**

Answer: E) 44.8 km/h

Question 32

correct option B (52.5 km/h) cao **B1**

Answer: B) 52.5 km/h

Question 33

correct option A (4 km) cao **B1**

Answer: A) 4 km

Question 34

correct option D (22 km/h) cao **B1**

Answer: D) 22 km/h

Question 35

correct option E (57.6 km/h) cao **B1**

Answer: E) 57.6 km/h

Question 36

correct option B (2 hours 30 minutes) cao **B1**

Answer: B) 2 hours 30 minutes

Question 37

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

Answer: C) 40 km/h

Question 38

correct option B (35 km/h) cao **B1**

Answer: B) 35 km/h

Question 39

correct option A (6 km) cao **B1**

Answer: A) 6 km

Question 40

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

Answer: D) 30 km/h

Question 41

correct option C (30 km) cao **B1**

Answer: C) 30 km

Question 42

correct option D (74 km/h) cao **B1**

Answer: D) 74 km/h

Question 43

correct option B (38 km/h) cao **B1**

Answer: B) 38 km/h

Question 44

correct option E (20 km/h) cao **B1**

Answer: E) 20 km/h

Question 45

correct option C (5 km) cao **B1**

Answer: C) 5 km

Question 46

correct option B (46.4 km/h) cao **B1**

Answer: B) 46.4 km/h

Question 47

correct option C (120 km) cao **B1**

Answer: C) 120 km

Question 48

correct option A (8 km/h) cao **B1**

Answer: A) 8 km/h

Question 49

correct option D (31.2 km/h) cao **B1**

Answer: D) 31.2 km/h

Question 50

correct option B (48 km/h) cao **B1**

Answer: B) 48 km/h

Question 51

60 km/h cao **B1**

Answer: 60 km/h

Question 52

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

Answer: A) 2 km

Question 53

correct option C (36 km) cao **B1**

Answer: C) 36 km

Question 54

correct option A (44.8 km/h) cao **B1**

Answer: A) 44.8 km/h

Question 55

correct option B (1 hour 45 minutes) cao **B1**

Answer: B) 1 hour 45 minutes

Question 56

correct option D (62.4 km/h) cao **B1**

Answer: D) 62.4 km/h

Question 57

correct option B (16 km/h) cao **B1**

Answer: B) 16 km/h

Question 58

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

Answer: A) 15 minutes

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Question 59

correct option D (21.6 km/h) cao **B1**

Answer: D) 21.6 km/h

Question 60

correct option E (18 km) cao **B1**

Answer: E) 18 km

Question 61

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

Answer: C) 33 km/h

Question 62

correct option E (17.5 km/h) cao **B1**

Answer: E) 17.5 km/h

Question 63

relative speed 50 - 40 = 10 km/h or equivalent method **M1**

time = 1/10 h = 0.1 h = 6 minutes cao **A1**

Answer: 6 minutes

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