2.104 Two-Way Tables and Venn Diagram Reasoning: 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 In a class of 60 pupils, 33 like pizza, 21 like pasta and 10 do both. How many pupils do neither?

- ☐ A) 54
- ☐ B) 44
- ☐ C) 16
- ☐ D) 15
- ☐ E) 6

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2 In a class of 48 pupils, 35 have a dog, 34 have a cat and 31 do both. How many pupils do only the first activity (have a dog)?

- ☐ A) 41
- ☐ B) 4
- ☐ C) 38
- ☐ D) 69
- ☐ E) 3

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3 In a class of 30 pupils, 12 play football, 8 play tennis and 7 do both. How many pupils do only the first activity (play football)?

- ☐ A) 1
- ☐ B) 20
- ☐ C) 24
- ☐ D) 5
- ☐ E) 10

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4 In a class of 26 pupils, 8 have a dog, 10 have a cat and 1 do both. How many pupils do only the first activity (have a dog)?

- [ ] A) 18
- [ ] B) 17
- [ ] C) 10
- [ ] D) 8
- [ ] E) 7

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5 In a class of 41 pupils, 13 play football, 24 play tennis and 6 do both. How many pupils do neither?

- [ ] A) 37
- [ ] B) 4
- [ ] C) 10
- [ ] D) 16
- [ ] E) 31

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6 In a class of 33 pupils, 13 have a dog, 8 have a cat and 5 do both. How many pupils do at least one of the activities?

- [ ] A) 16
- [ ] B) 22
- [ ] C) 12
- [ ] D) 8
- [ ] E) 21

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7 In a class of 55 pupils, 29 study French, 35 study Spanish and 16 do both. How many pupils do only the first activity (study French)?

- [ ] A) 64
- [ ] B) 13
- [ ] C) 48
- [ ] D) 19
- [ ] E) 23

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8 In a class of 22 pupils, 11 play football, 14 play tennis and 10 do both. How many pupils do only the second activity (play tennis)?

- [ ] A) 25
- [ ] B) 3
- [ ] C) 17
- [ ] D) 4
- [ ] E) 15

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9 In a class of 39 pupils, 22 play football, 9 play tennis and 7 do both. How many pupils do at least one of the activities?

- [ ] A) 15
- [ ] B) 31
- [ ] C) 22
- [ ] D) 24
- [ ] E) 8

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10 A small snack stall recorded purchases by 40 customers. 18 bought cakes, 9 bought sandwiches and 6 bought both. How many bought only a cake?

- [ ] A) 24
- [ ] B) 9
- [ ] C) 6
- [ ] D) 18
- [ ] E) 12

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11 In a class of 30 pupils, 16 like pizza, 18 like pasta and 6 do both. How many pupils do at least one of the activities?

- [ ] A) 10
- [ ] B) 2
- [ ] C) 28
- [ ] D) 8
- [ ] E) 34

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12 In a class of 49 pupils, 30 like pizza, 16 like pasta and 7 do both. How many pupils do neither?

- ☐ A) 46
- ☐ B) 10
- ☐ C) 3
- ☐ D) 39
- ☐ E) 11

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13 In a class of 20 pupils, 10 study French, 8 study Spanish and 7 do both. How many pupils do only the first activity (study French)?

- ☐ A) 3
- ☐ B) 16
- ☐ C) 2
- ☐ D) 18
- ☐ E) 11

---

14 In a class of 41 pupils, 10 study French, 34 study Spanish and 5 do both. How many pupils do only the first activity (study French)?

- ☐ A) 4
- ☐ B) 7
- ☐ C) 5
- ☐ D) 44
- ☐ E) 6

---

15 In a class of 52 pupils, 26 study French, 37 study Spanish and 23 do both. How many pupils do at least one of the activities?

- ☐ A) 41
- ☐ B) 35
- ☐ C) 12
- ☐ D) 63
- ☐ E) 40

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16 In a class of 22 pupils, 11 study French, 12 study Spanish and 8 do both. How many pupils do only the second activity (study Spanish)?

- [ ] A) 23
- [ ] B) 4
- [ ] C) 3
- [ ] D) 5
- [ ] E) 15

---

17 In a class of 44 pupils, 26 study French, 11 study Spanish and 6 do both. How many pupils do only the second activity (study Spanish)?

- [ ] A) 4
- [ ] B) 37
- [ ] C) 7
- [ ] D) 5
- [ ] E) 19

---

18 In a class of 54 pupils, 19 like pizza, 21 like pasta and 10 do both. How many pupils do only the first activity (like pizza)?

- [ ] A) 8
- [ ] B) 14
- [ ] C) 9
- [ ] D) 40
- [ ] E) 10

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19 In a class of 44 pupils, 38 play football, 14 play tennis and 12 do both. How many pupils do at least one of the activities?

- [ ] A) 40
- [ ] B) 41
- [ ] C) 16
- [ ] D) 26
- [ ] E) 52

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20 In a class of 45 pupils, 29 study French, 11 study Spanish and 7 do both. How many pupils do at least one of the activities?

- [ ] A) 40
- [ ] B) 22
- [ ] C) 5
- [ ] D) 19
- [ ] E) 33

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21 In a class of 38 pupils, 16 like pizza, 27 like pasta and 13 do both. How many pupils do only the first activity (like pizza)?

- [ ] A) 4
- [ ] B) 21
- [ ] C) 30
- [ ] D) 3
- [ ] E) 43

---

22 In a class of 39 pupils, 12 like pizza, 13 like pasta and 7 do both. How many pupils do only the first activity (like pizza)?

- [ ] A) 6
- [ ] B) 5
- [ ] C) 25
- [ ] D) 28
- [ ] E) 14

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23 In a class of 46 pupils, 31 play football, 13 play tennis and 2 do both. How many pupils do only the first activity (play football)?

- [ ] A) 42
- [ ] B) 28
- [ ] C) 2
- [ ] D) 44
- [ ] E) 29

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24 In a class of 59 pupils, 25 have a dog, 18 have a cat and 14 do both. How many pupils do at least one of the activities?

- [ ] A) 29
- [ ] B) 43
- [ ] C) 16
- [ ] D) 11
- [ ] E) 44

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25 In a class of 22 pupils, 14 study French, 8 study Spanish and 4 do both. How many pupils do only the second activity (study Spanish)?

- [ ] A) 22
- [ ] B) 5
- [ ] C) 10
- [ ] D) 4
- [ ] E) 0

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26 In a class of 33 pupils, 10 study French, 11 study Spanish and 9 do both. How many pupils do at least one of the activities?

- [ ] A) 21
- [ ] B) 12
- [ ] C) 13
- [ ] D) 11
- [ ] E) 30

---

27 In a class of 48 pupils, 9 have a dog, 35 have a cat and 5 do both. How many pupils do only the first activity (have a dog)?

- [ ] A) 44
- [ ] B) 5
- [ ] C) 4
- [ ] D) 39
- [ ] E) 14

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28 In a class of 55 pupils, 40 have a dog, 18 have a cat and 14 do both. How many pupils do at least one of the activities?

- [ ] A) 44
- [ ] B) 25
- [ ] C) 11
- [ ] D) 58
- [ ] E) 26

---

29 In a class of 29 pupils, 11 play football, 12 play tennis and 9 do both. How many pupils do at least one of the activities?

- [ ] A) 6
- [ ] B) 2
- [ ] C) 24
- [ ] D) 23
- [ ] E) 14

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30 In a class of 50 pupils, 28 play football, 22 play tennis and 6 do both. How many pupils do at least one of the activities?

- [ ] A) 43
- [ ] B) 50
- [ ] C) 45
- [ ] D) 44
- [ ] E) 0

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31 In a class of 58 pupils, 30 study French, 10 study Spanish and 4 do both. How many pupils do at least one of the activities?

- [ ] A) 18
- [ ] B) 40
- [ ] C) 36
- [ ] D) 35
- [ ] E) 22

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32 A shop recorded purchases by 52 customers. 16 bought bananas. What is the probability that a randomly chosen customer bought bananas?

- [ ] A) 4/13
- [ ] B) 36/52
- [ ] C) 16/36
- [ ] D) 1/4
- [ ] E) 16/50

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Mark scheme · 2.104 Two-Way Tables and Venn Diagram Reasoning: 30-minute Pack

Question 1

correct option C (16) cao **B1**

Answer: C) 16

Question 2

correct option B (4) cao **B1**

Answer: B) 4

Question 3

correct option D (5) cao **B1**

Answer: D) 5

Question 4

correct option E (7) cao **B1**

Answer: E) 7

Question 5

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

Answer: C) 10

Question 6

correct option A (16) cao **B1**

Answer: A) 16

Question 7

correct option B (13) cao **B1**

Answer: B) 13

Question 8

correct option D (4) cao **B1**

Answer: D) 4

Question 9

correct option D (24) cao **B1**

Answer: D) 24

Question 10

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

Answer: E) 12

Question 11

correct option C (28) cao **B1**

Answer: C) 28

Question 12

correct option B (10) cao **B1**

Answer: B) 10

Question 13

correct option A (3) cao **B1**

Answer: A) 3

Question 14

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

Answer: C) 5

Question 15

correct option E (40) cao **B1**

Answer: E) 40

Question 16

correct option B (4) cao **B1**

Answer: B) 4

Question 17

correct option D (5) cao **B1**

Answer: D) 5

Question 18

correct option C (9) cao **B1**

Answer: C) 9

Question 19

correct option A (40) cao **B1**

Answer: A) 40

Question 20

correct option E (33) cao **B1**

Answer: E) 33

Question 21

correct option D (3) cao **B1**

Answer: D) 3

Question 22

correct option B (5) cao **B1**

Answer: B) 5

Question 23

correct option E (29) cao **B1**

Answer: E) 29

Question 24

correct option A (29) cao **B1**

Answer: A) 29

Question 25

correct option D (4) cao **B1**

Answer: D) 4

Question 26

correct option B (12) cao **B1**

Answer: B) 12

Question 27

correct option C (4) cao **B1**

Answer: C) 4

Question 28

correct option A (44) cao **B1**

Answer: A) 44

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Question 29

correct option E (14) cao **B1**

Answer: E) 14

Question 30

correct option D (44) cao **B1**

Answer: D) 44

Question 31

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

Answer: C) 36

Question 32

correct option A (4/13) cao **B1**

Answer: A) 4/13

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