2.73 Adding and Subtracting Fractions with Unlike Denominators: 30-minute Pack

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

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Calculate 5/8 + 1/3 + 1/24. Write your answer as a whole number or fraction in simplest form.

(2)

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2 A jug contains 2 1/3 litres of juice. Eva pours out 7/12 litre. How much juice remains? Give your answer as a mixed number in simplest form.

(2)

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3 Three friends share a pizza. Naomi ate 3/8 and Leo ate 1/6. What fraction of the pizza did Priya eat? Give your answer in simplest form.

(3)

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4 Ben eats 3/4 of a pizza and a friend eats 2/3 of the same pizza. What fraction of the pizza has been eaten?

- ☐ A) 5/12
- ☐ B) 1 5/12
- ☐ C) 1 1/4
- ☐ D) 1/2
- ☐ E) 5/7

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5 A jug is 5/6 full. Ben pours out 1/4 of the jug. What fraction of the jug is now full?

- [ ] A) 2
- [ ] B) 1/3
- [ ] C) 1/6
- [ ] D) 7/12
- [ ] E) 5/24

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6 A jug is 7/10 full. Lily pours out 1/6 of the jug. What fraction of the jug is now full?

- [ ] A) 3/5
- [ ] B) 7/60
- [ ] C) 1/5
- [ ] D) 1 1/2
- [ ] E) 8/15

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7 Kwame eats 1/3 of a pizza and a friend eats 1/12 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/36
- [ ] B) 2/15
- [ ] C) 5/12
- [ ] D) 1/18
- [ ] E) 1/6

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8 A jug is 3/4 full. Niamh pours out 1/3 of the jug. What fraction of the jug is now full?

- [ ] A) 2
- [ ] B) 5/12
- [ ] C) 1/6
- [ ] D) 1/2
- [ ] E) 1/4

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9 Chloe eats 1/15 of a pizza and a friend eats 2/3 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/6
- [ ] B) 1/5
- [ ] C) 2/45
- [ ] D) 1/15
- [ ] E) 11/15

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10 Poppy eats 1/2 of a pizza and a friend eats 2/3 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1
- [ ] B) 3/5
- [ ] C) 1 1/6
- [ ] D) 1/3
- [ ] E) 1/2

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11 Grace eats 9/10 of a pizza and a friend eats 2/3 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 11/13
- [ ] B) 11/30
- [ ] C) 1 1/10
- [ ] D) 1 17/30
- [ ] E) 3/5

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12 A jug is 5/6 full. Noah pours out 3/4 of the jug. What fraction of the jug is now full?

- [ ] A) 1/12
- [ ] B) 1/6
- [ ] C) 1/3
- [ ] D) 5/8
- [ ] E) 1

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13 Noah eats 3/4 of a pizza and a friend eats 1/3 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/3
- [ ] B) 1 1/12
- [ ] C) 1/4
- [ ] D) 4/7
- [ ] E) 1

---

14 Lily eats 1/2 of a pizza and a friend eats 1/6 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/4
- [ ] B) 1/12
- [ ] C) 1/3
- [ ] D) 1/6
- [ ] E) 2/3

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15 A jug is 7/12 full. Ben pours out 2/5 of the jug. What fraction of the jug is now full?

- [ ] A) 1/12
- [ ] B) 7/30
- [ ] C) 5/7
- [ ] D) 11/60
- [ ] E) 5/12

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16 Dylan eats 1/4 of a pizza and a friend eats 1/5 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/20
- [ ] B) 1/10
- [ ] C) 2/5
- [ ] D) 2/9
- [ ] E) 9/20

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17 Niamh eats 3/5 of a pizza and a friend eats 1/2 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1 1/10
- [ ] B) 2/5
- [ ] C) 3/10
- [ ] D) 4/7
- [ ] E) 4/5

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18 Sienna eats 8/9 of a pizza and a friend eats 5/8 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1 4/9
- [ ] B) 1 37/72
- [ ] C) 13/72
- [ ] D) 13/17
- [ ] E) 5/9

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19 Aisha eats 1/4 of a pizza and a friend eats 1/8 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/6
- [ ] B) 1/16
- [ ] C) 1/32
- [ ] D) 3/8
- [ ] E) 1/4

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20 Arjun eats 1/4 of a pizza and a friend eats 1/2 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/3
- [ ] B) 1/2
- [ ] C) 1/8
- [ ] D) 1/4
- [ ] E) 3/4

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21 Maya eats 1/8 of a pizza and a friend eats 1/3 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/12
- [ ] B) 1/24
- [ ] C) 11/24
- [ ] D) 2/11
- [ ] E) 1/4

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22 A jug is 9/10 full. Niamh pours out 4/9 of the jug. What fraction of the jug is now full?

- [ ] A) 41/90
- [ ] B) 1/2
- [ ] C) 1/18
- [ ] D) 2/5
- [ ] E) 5

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23 Isla eats 4/5 of a pizza and a friend eats 1/3 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 5/8
- [ ] B) 1 2/15
- [ ] C) 1
- [ ] D) 4/15
- [ ] E) 1/3

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24 A jug is 4/5 full. Poppy pours out 1/3 of the jug. What fraction of the jug is now full?

- [ ] A) 4/15
- [ ] B) 1 1/2
- [ ] C) 7/15
- [ ] D) 3/5
- [ ] E) 1/5

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25 Priya eats 7/9 of a pizza and a friend eats 1/8 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 65/72
- [ ] B) 1/9
- [ ] C) 7/72
- [ ] D) 8/9
- [ ] E) 8/17

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26 A jug is 7/8 full. Dylan pours out 5/6 of the jug. What fraction of the jug is now full?

- [ ] A) 1/4
- [ ] B) 1/12
- [ ] C) 1
- [ ] D) 35/48
- [ ] E) 1/24

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27 Esme eats 3/4 of a pizza and a friend eats 7/10 of the same pizza. What fraction of the pizza has been eaten?

- [ ] A) 1/2
- [ ] B) 1/4
- [ ] C) 1 9/20
- [ ] D) 1
- [ ] E) 5/7

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28 A jug is 7/8 full. Leo pours out 1/12 of the jug. What fraction of the jug is now full?

- [ ] A) 19/24
- [ ] B) 1/4
- [ ] C) 1/2
- [ ] D) 7/96
- [ ] E) 1/16

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Mark scheme · 2.73 Adding and Subtracting Fractions with Unlike Denominators: 30-minute Pack

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

Question 1

Use of common denominator or equivalent method (5/8 = 15/24, 1/3 = 8/24) seen **M1**

1 cao **A1**

Answer: 1 (since 15/24 + 8/24 + 1/24 = 24/24 = 1).

Question 2

Convert 2 1/3 to improper fraction and subtract using common denominator (7/3 - 7/12 or equivalent) seen **M1**

1 3/4 litres cao **A1**

Answer: 1 3/4 litres.

Question 3

Common denominator used to add Naomi and Leo's fractions (3/8 = 9/24, 1/6 = 4/24) or equivalent **M1**

Subtracting their total from 1 to find Priya's share (1 - 13/24) seen **M1**

11/24 cao **A1**

Answer: 11/24 of the pizza.

Question 4

correct option B (1 5/12) cao; common denominator 12 **B1**

Answer: B) 1 5/12

Question 5

correct option D (7/12) cao; common denominator 12 **B1**

Answer: D) 7/12

Question 6

correct option E (8/15) cao; common denominator 30 **B1**

Answer: E) 8/15

Question 7

correct option C (5/12) cao; common denominator 12 **B1**

Answer: C) 5/12

Question 8

correct option B (5/12) cao; common denominator 12 **B1**

Answer: B) 5/12

Question 9

correct option E (11/15) cao; common denominator 15 **B1**

Answer: E) 11/15

Question 10

correct option C (1 1/6) cao; common denominator 6 **B1**

Answer: C) 1 1/6

Question 11

correct option D (1 17/30) cao; common denominator 30 **B1**

Answer: D) 1 17/30

Question 12

correct option A (1/12) cao; common denominator 12 **B1**

Answer: A) 1/12

Question 13

correct option B (1 1/12) cao; common denominator 12 **B1**

Answer: B) 1 1/12

Question 14

correct option E (2/3) cao; common denominator 6 **B1**

Answer: E) 2/3

Question 15

correct option D (11/60) cao; common denominator 60 **B1**

Answer: D) 11/60

Question 16

correct option E (9/20) cao; common denominator 20 **B1**

Answer: E) 9/20

Question 17

correct option A (1 1/10) cao; common denominator 10 **B1**

Answer: A) 1 1/10

Question 18

correct option B (1 37/72) cao; common denominator 72 **B1**

Answer: B) 1 37/72

Question 19

correct option D (3/8) cao; common denominator 8 **B1**

Answer: D) 3/8

Question 20

correct option E (3/4) cao; common denominator 4 **B1**

Answer: E) 3/4

Question 21

correct option C (11/24) cao; common denominator 24 **B1**

Answer: C) 11/24

Question 22

correct option A (41/90) cao; common denominator 90 **B1**

Answer: A) 41/90

Question 23

correct option B (1 2/15) cao; common denominator 15 **B1**

Answer: B) 1 2/15

Question 24

correct option C (7/15) cao; common denominator 15 **B1**

Answer: C) 7/15

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Question 25

correct option A (65/72) cao; common denominator 72 **B1**

Answer: A) 65/72

Question 26

correct option E (1/24) cao; common denominator 24 **B1**

Answer: E) 1/24

Question 27

correct option C (1 9/20) cao; common denominator 20 **B1**

Answer: C) 1 9/20

Question 28

correct option A (19/24) cao; common denominator 24 **B1**

Answer: A) 19/24

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