2.2 Fractions, Decimals and Percentages: 1-hour Pack

ISEB CE.M2 · Calculator allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out 3/8 × 4 1/3. Give your answer in its simplest form, as a mixed number if it is greater than 1.

- [ ] A) 9/104
- [ ] B) 3 6/11
- [ ] C) 2/3
- [ ] D) 4 17/24
- [ ] E) 1 5/8

---

2 Which of these values is the greatest?

- [ ] A) 48%
- [ ] B) 0.28
- [ ] C) 0.285
- [ ] D) 0.385
- [ ] E) 19/40

---

3 Work out 1 1/12 - 1/8. Give your answer as a fraction in its simplest form.

- [ ] A) 1/2
- [ ] B) 23/24
- [ ] C) 11/12
- [ ] D) 1
- [ ] E) 1/8

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4 Work out 2/3 ÷ 5/6. Give your answer in its simplest form.

- [ ] A) 4/5
- [ ] B) 7/18
- [ ] C) 1 4/5
- [ ] D) 5/9
- [ ] E) 1 1/9

---

5 Which of these values is the smallest?

- [ ] A) 0.325
- [ ] B) 3/8
- [ ] C) 8/25
- [ ] D) 0.465
- [ ] E) 50%

---

6 Work out 1 1/2 + 1/6. Give your answer as a fraction in its simplest form, or a mixed number if it is greater than 1.

- [ ] A) 1 5/6
- [ ] B) 1 1/2
- [ ] C) 2/3
- [ ] D) 1 2/3
- [ ] E) 1/4

---

7 Work out 7/8 ÷ 1/2. Give your answer in its simplest form, as a mixed number if it is greater than 1.

- [ ] A) 1 3/4
- [ ] B) 4/7
- [ ] C) 7/10
- [ ] D) 1/2
- [ ] E) 7/16

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8 Which of these values is the smallest?

- [ ] A) 0.645
- [ ] B) 0.445
- [ ] C) 0.485
- [ ] D) 0.6
- [ ] E) 48%

---

9 Work out 3 1/2 + 3/8. Give your answer as a fraction in its simplest form, or a mixed number if it is greater than 1.

- [ ] A) 1 1/4
- [ ] B) 3 3/4
- [ ] C) 1
- [ ] D) 3 7/8
- [ ] E) 5/8

---

10 Work out 7/8 × 1/9. Give your answer in its simplest form.

- [ ] A) 7 7/8
- [ ] B) 71/72
- [ ] C) 7/17
- [ ] D) 8/63
- [ ] E) 7/72

---

11 Hamza has a 18 km route to cycle. Hamza cycles 1/6 of the route before lunch and 1/3 of the distance that is left after lunch. How many kilometres are left?

- [ ] A) 5 km
- [ ] B) 10 km
- [ ] C) 12 km
- [ ] D) 8 km
- [ ] E) 9 km

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12 Which of these values is the smallest?

- [ ] A) 48%
- [ ] B) 0.65
- [ ] C) 0.655
- [ ] D) 3/8
- [ ] E) 36%

---

13 Work out 5/8 - 1/12. Give your answer as a fraction in its simplest form.

- [ ] A) 7/12
- [ ] B) 5/96
- [ ] C) 1/24
- [ ] D) 13/24
- [ ] E) 1/2

---

14 Work out 4/5 ÷ 1 1/2. Give your answer in its simplest form.

- [ ] A) 8/15
- [ ] B) 1 7/8
- [ ] C) 5/6
- [ ] D) 1 1/5
- [ ] E) 7/10

---

15 Which of these values is the greatest?

- [ ] A) 0.29
- [ ] B) 5/8
- [ ] C) 1/2
- [ ] D) 3/4
- [ ] E) 40%

---

16 Work out 5/9 - 2/5. Give your answer as a fraction in its simplest form.

- [ ] A) 1/15
- [ ] B) 3/14
- [ ] C) 8/45
- [ ] D) 2/9
- [ ] E) 7/45

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17 Work out 1 8/9 × 3 1/4. Give your answer in its simplest form, as a mixed number if it is greater than 1.

- [ ] A) 6 5/36
- [ ] B) 5/6
- [ ] C) 17
- [ ] D) 5 5/36
- [ ] E) 68/117

---

18 Freddie has a 600 km route to cycle. Freddie cycles 1/2 of the route before lunch and 2/5 of the route after lunch. How many kilometres are left?

- [ ] A) 300 km
- [ ] B) 360 km
- [ ] C) 60 km
- [ ] D) 180 km
- [ ] E) 540 km

---

19 Which of these values is the greatest?

- [ ] A) 0.48
- [ ] B) 50%
- [ ] C) 2/5
- [ ] D) 0.185
- [ ] E) 18%

---

20 Work out 1 1/2 - 2/5. Give your answer as a fraction in its simplest form, or a mixed number if it is greater than 1.

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

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21 Work out 9/10 ÷ 8/9. Give your answer in its simplest form, as a mixed number if it is greater than 1.

- [ ] A) 1 1/4
- [ ] B) 17/90
- [ ] C) 80/81
- [ ] D) 1 1/80
- [ ] E) 4/5

---

22 Which of these values is the smallest?

- [ ] A) 0.4
- [ ] B) 0.5
- [ ] C) 3/8
- [ ] D) 48%
- [ ] E) 7/25

---

23 Work out 2/9 + 2/3. Give your answer as a fraction in its simplest form.

- [ ] A) 4/27
- [ ] B) 8/9
- [ ] C) 1/3
- [ ] D) 1
- [ ] E) 4/9

---

24 Work out 1/5 × 2/3. Give your answer in its simplest form.

- [ ] A) 1/5
- [ ] B) 1/4
- [ ] C) 13/15
- [ ] D) 2/15
- [ ] E) 3/10

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25 There are 220 pupils in a year group. 1/4 of them walk to school and 3/5 of them cycle. The rest take the bus. How many take the bus?

- [ ] A) 33
- [ ] B) 66
- [ ] C) 187
- [ ] D) 165
- [ ] E) 88

---

26 Which of these values is the smallest?

- [ ] A) 0.615
- [ ] B) 61%
- [ ] C) 0.515
- [ ] D) 7/10
- [ ] E) 0.715

---

27 Work out 3 1/2 + 7/9. Give your answer as a fraction in its simplest form, or a mixed number if it is greater than 1.

- [ ] A) 1 3/11
- [ ] B) 2 13/18
- [ ] C) 7/9
- [ ] D) 4 1/3
- [ ] E) 4 5/18

---

28 Work out 4/5 × 3/4. Give your answer in its simplest form.

- [ ] A) 7/20
- [ ] B) 3/5
- [ ] C) 1 11/20
- [ ] D) 1 1/3
- [ ] E) 15/16

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29 Which of these values is the greatest?

- [ ] A) 0.785
- [ ] B) 80%
- [ ] C) 0.485
- [ ] D) 60%
- [ ] E) 1/2

---

30 Work out 3/4 - 1/3. Give your answer as a fraction in its simplest form.

- [ ] A) 1/4
- [ ] B) 1/6
- [ ] C) 5/12
- [ ] D) 2/7
- [ ] E) 1/2

---

31 Work out 3/4 ÷ 1 1/8. Give your answer in its simplest form.

- [ ] A) 1 1/2
- [ ] B) 27/32
- [ ] C) 3/8
- [ ] D) 2/3
- [ ] E) 2 1/4

---

32 Which of these values is the greatest?

- [ ] A) 0.6
- [ ] B) 84%
- [ ] C) 0.74
- [ ] D) 0.835
- [ ] E) 0.5

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33 Work out 7/9 + 3/8. Give your answer as a fraction in its simplest form, or a mixed number if it is greater than 1.

- [ ] A) 1 5/36
- [ ] B) 10/17
- [ ] C) 1 1/6
- [ ] D) 5/36
- [ ] E) 1 11/72

---

34 Work out 1 2/9 × 1 4/9. Give your answer in its simplest form, as a mixed number if it is greater than 1.

- [ ] A) 2 2/3
- [ ] B) 7 17/18
- [ ] C) 11/13
- [ ] D) 1 62/81
- [ ] E) 8/27

---

35 Which of these values is the greatest?

- [ ] A) 14/25
- [ ] B) 60%
- [ ] C) 65%
- [ ] D) 57%
- [ ] E) 64%

---

36 Work out 9/10 + 1/2. Give your answer as a fraction in its simplest form, or a mixed number if it is greater than 1.

- [ ] A) 1 2/5
- [ ] B) 5/6
- [ ] C) 1
- [ ] D) 9/20
- [ ] E) 1 1/2

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37 Work out 1/4 × 1/2. Give your answer in its simplest form.

- [ ] A) 1/4
- [ ] B) 1/6
- [ ] C) 2
- [ ] D) 1/2
- [ ] E) 1/8

---

38 Mohammed has £24. Mohammed spends 1/3 of the money on a book and 1/2 of the money on a game. How much money is left?

- [ ] A) £16
- [ ] B) £4
- [ ] C) £12
- [ ] D) £20
- [ ] E) £8

---

39 Which of these values is the greatest?

- [ ] A) 21%
- [ ] B) 28%
- [ ] C) 1/4
- [ ] D) 0.365
- [ ] E) 13/40

---

40 Work out 1 2/9 - 2/7. Give your answer as a fraction in its simplest form.

- [ ] A) 1/7
- [ ] B) 20/21
- [ ] C) 59/63
- [ ] D) 58/63
- [ ] E) 22/63

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41 Work out 4/5 × 1/10. Give your answer in its simplest form.

- [ ] A) 1/8
- [ ] B) 2/25
- [ ] C) 9/10
- [ ] D) 8
- [ ] E) 4/15

---

42 Which of these values is the greatest?

- [ ] A) 13/20
- [ ] B) 0.425
- [ ] C) 19/40
- [ ] D) 0.5
- [ ] E) 23/40

---

43 Work out 1/4 + 7/15. Give your answer as a fraction in its simplest form.

- [ ] A) 11/15
- [ ] B) 7/10
- [ ] C) 7/60
- [ ] D) 43/60
- [ ] E) 2/15

---

44 Work out 1/2 ÷ 4/5. Give your answer in its simplest form.

- [ ] A) 4/7
- [ ] B) 2 1/2
- [ ] C) 1 3/5
- [ ] D) 1/2
- [ ] E) 5/8

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45 Ffion has £200. Ffion spends 3/5 of the money on a book, then 1/4 of the money that remains on lunch. How much money is left?

- [ ] A) £20
- [ ] B) £60
- [ ] C) £140
- [ ] D) £80
- [ ] E) £30

---

46 Which of these values is the greatest?

- [ ] A) 0.555
- [ ] B) 0.465
- [ ] C) 46%
- [ ] D) 0.62
- [ ] E) 0.565

---

47 Work out 7/10 - 1/3. Give your answer as a fraction in its simplest form.

- [ ] A) 1/5
- [ ] B) 7/30
- [ ] C) 1/3
- [ ] D) 2/5
- [ ] E) 11/30

---

48 Work out 7/8 × 5/8. Give your answer in its simplest form.

- [ ] A) 2 3/16
- [ ] B) 5/7
- [ ] C) 35/64
- [ ] D) 1 2/5
- [ ] E) 3/16

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49 Which of these values is the smallest?

- [ ] A) 60%
- [ ] B) 50%
- [ ] C) 14/25
- [ ] D) 0.51
- [ ] E) 58%

---

50 Work out 1/2 + 1/5. Give your answer as a fraction in its simplest form.

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

---

51 Work out 2/5 × 1/4. Give your answer in its simplest form.

- [ ] A) 1/10
- [ ] B) 13/20
- [ ] C) 2/9
- [ ] D) 3/20
- [ ] E) 5/8

---

52 There are 600 pupils in a year group. 3/4 of them walk to school. 2/5 of the others cycle. The rest take the bus. How many take the bus?

- [ ] A) 360
- [ ] B) 60
- [ ] C) 90
- [ ] D) 150
- [ ] E) 510

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53 Which of these values is the greatest?

- [ ] A) 0.73
- [ ] B) 0.735
- [ ] C) 0.655
- [ ] D) 0.8
- [ ] E) 7/10

---

54 Work out 1/10 + 1/6. Give your answer as a fraction in its simplest form.

- [ ] A) 4/15
- [ ] B) 1/8
- [ ] C) 1/30
- [ ] D) 1/60
- [ ] E) 1/15

---

55 Work out 3/4 × 4/9. Give your answer in its simplest form.

- [ ] A) 7/36
- [ ] B) 1/3
- [ ] C) 16/27
- [ ] D) 1 11/16
- [ ] E) 1 7/36

---

56 Which of these values is the smallest?

- [ ] A) 60%
- [ ] B) 0.485
- [ ] C) 14/25
- [ ] D) 0.445
- [ ] E) 5/8

---

57 Work out 13/15 - 1/8. Give your answer as a fraction in its simplest form.

- [ ] A) 3/4
- [ ] B) 11/15
- [ ] C) 13/120
- [ ] D) 1/10
- [ ] E) 89/120

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58 Work out 2/5 ÷ 1/6. Give your answer in its simplest form, as a mixed number if it is greater than 1.

- ☐ A) 15
- ☐ B) 5/12
- ☐ C) 1/10
- ☐ D) 1/15
- ☐ E) 2 2/5

---

59 Rhys has a 96 km route to cycle. Rhys cycles 1/8 of the route before lunch and 1/3 of the route after lunch. How many kilometres are left?

- ☐ A) 56 km
- ☐ B) 52 km
- ☐ C) 28 km
- ☐ D) 64 km
- ☐ E) 44 km

---

60 Which of these values is the greatest?

- ☐ A) 0.625
- ☐ B) 3/5
- ☐ C) 0.575
- ☐ D) 17/40
- ☐ E) 3/8

---

61 A market trader buys 150 scarves at £4.20 each. She sells all 150 scarves for a total of £819. Calculate her percentage profit.

(4)

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Mark scheme · 2.2 Fractions, Decimals and Percentages: 1-hour Pack

Question 1

E cao (1 5/8); 3/8 × 13/3 = 1 5/8 **B1**

Answer: E) 1 5/8

Question 2

A cao (48%); convert every value to a decimal and compare **B1**

Answer: A) 48%

Question 3

B cao (23/24); common denominator 24; result 23/24 **B1**

Answer: B) 23/24

Question 4

A cao (4/5); 2/3 ÷ 5/6 = 4/5 **B1**

Answer: A) 4/5

Question 5

C cao (8/25); convert every value to a decimal and compare **B1**

Answer: C) 8/25

Question 6

D cao (1 2/3); common denominator 6; result 1 2/3 **B1**

Answer: D) 1 2/3

Question 7

A cao (1 3/4); 7/8 ÷ 1/2 = 1 3/4 **B1**

Answer: A) 1 3/4

Question 8

B cao (0.445); convert every value to a decimal and compare **B1**

Answer: B) 0.445

Question 9

D cao (3 7/8); common denominator 8; result 3 7/8 **B1**

Answer: D) 3 7/8

Question 10

E cao (7/72); 7/8 × 1/9 = 7/72 **B1**

Answer: E) 7/72

Question 11

B cao (10 km); work out each fraction of the amount and subtract **B1**

Answer: B) 10 km

Question 12

E cao (36%); convert every value to a decimal and compare **B1**

Answer: E) 36%

Question 13

D cao (13/24); common denominator 24; result 13/24 **B1**

Answer: D) 13/24

Question 14

A cao (8/15); 4/5 ÷ 3/2 = 8/15 **B1**

Answer: A) 8/15

Question 15

D cao (3/4); convert every value to a decimal and compare **B1**

Answer: D) 3/4

Question 16

E cao (7/45); common denominator 45; result 7/45 **B1**

Answer: E) 7/45

Question 17

A cao (6 5/36); 17/9 × 13/4 = 6 5/36 **B1**

Answer: A) 6 5/36

Question 18

C cao (60 km); work out each fraction of the amount and subtract **B1**

Answer: C) 60 km

Question 19

B cao (50%); convert every value to a decimal and compare **B1**

Answer: B) 50%

Question 20

C cao (1 1/10); common denominator 10; result 1 1/10 **B1**

Answer: C) 1 1/10

Question 21

D cao (1 1/80); 9/10 ÷ 8/9 = 1 1/80 **B1**

Answer: D) 1 1/80

Question 22

E cao (7/25); convert every value to a decimal and compare **B1**

Answer: E) 7/25

Question 23

B cao (8/9); common denominator 9; result 8/9 **B1**

Answer: B) 8/9

Question 24

D cao (2/15); 1/5 × 2/3 = 2/15 **B1**

Answer: D) 2/15

Question 25

A cao (33); work out each fraction of the amount and subtract **B1**

Answer: A) 33

Question 26

C cao (0.515); convert every value to a decimal and compare **B1**

Answer: C) 0.515

Question 27

E cao (4 5/18); common denominator 18; result 4 5/18 **B1**

Answer: E) 4 5/18

Question 28

B cao (3/5); 4/5 × 3/4 = 3/5 **B1**

Answer: B) 3/5

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Question 29

B cao (80%); convert every value to a decimal and compare **B1**

Answer: B) 80%

Question 30

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

Answer: C) 5/12

Question 31

D cao (2/3); 3/4 ÷ 9/8 = 2/3 **B1**

Answer: D) 2/3

Question 32

B cao (84%); convert every value to a decimal and compare **B1**

Answer: B) 84%

Question 33

E cao (1 11/72); common denominator 72; result 1 11/72 **B1**

Answer: E) 1 11/72

Question 34

D cao (1 62/81); 11/9 × 13/9 = 1 62/81 **B1**

Answer: D) 1 62/81

Question 35

C cao (65%); convert every value to a decimal and compare **B1**

Answer: C) 65%

Question 36

A cao (1 2/5); common denominator 10; result 1 2/5 **B1**

Answer: A) 1 2/5

Question 37

E cao (1/8); 1/4 × 1/2 = 1/8 **B1**

Answer: E) 1/8

Question 38

B cao (£4); work out each fraction of the amount and subtract **B1**

Answer: B) £4

Question 39

D cao (0.365); convert every value to a decimal and compare **B1**

Answer: D) 0.365

Question 40

C cao (59/63); common denominator 63; result 59/63 **B1**

Answer: C) 59/63

Question 41

B cao (2/25); 4/5 × 1/10 = 2/25 **B1**

Answer: B) 2/25

Question 42

A cao (13/20); convert every value to a decimal and compare **B1**

Answer: A) 13/20

Question 43

D cao (43/60); common denominator 60; result 43/60 **B1**

Answer: D) 43/60

Question 44

E cao (5/8); 1/2 ÷ 4/5 = 5/8 **B1**

Answer: E) 5/8

Question 45

B cao (£60); work out each fraction of the amount and subtract **B1**

Answer: B) £60

Question 46

D cao (0.62); convert every value to a decimal and compare **B1**

Answer: D) 0.62

Question 47

E cao (11/30); common denominator 30; result 11/30 **B1**

Answer: E) 11/30

Question 48

C cao (35/64); 7/8 × 5/8 = 35/64 **B1**

Answer: C) 35/64

Question 49

B cao (50%); convert every value to a decimal and compare **B1**

Answer: B) 50%

Question 50

E cao (7/10); common denominator 10; result 7/10 **B1**

Answer: E) 7/10

Question 51

A cao (1/10); 2/5 × 1/4 = 1/10 **B1**

Answer: A) 1/10

Question 52

C cao (90); work out each fraction of the amount and subtract **B1**

Answer: C) 90

Question 53

D cao (0.8); convert every value to a decimal and compare **B1**

Answer: D) 0.8

Question 54

A cao (4/15); common denominator 30; result 4/15 **B1**

Answer: A) 4/15

Question 55

B cao (1/3); 3/4 × 4/9 = 1/3 **B1**

Answer: B) 1/3

Question 56

D cao (0.445); convert every value to a decimal and compare **B1**

Answer: D) 0.445

Question 57

E cao (89/120); common denominator 120; result 89/120 **B1**

Answer: E) 89/120

Question 58

E cao (2 2/5); 2/5 ÷ 1/6 = 2 2/5 **B1**

Answer: E) 2 2/5

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Question 59

B cao (52 km); work out each fraction of the amount and subtract **B1**

Answer: B) 52 km

Question 60

A cao (0.625); convert every value to a decimal and compare **B1**

Answer: A) 0.625

Question 61

cost = 150 x 4.20 = 630 **M1**

profit = 819 - 630 = 189 (dependent on previous method) **M1**

189 / 630 oe (dependent on previous method) **M1**

30% cao **A1**

Answer: 30%

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