

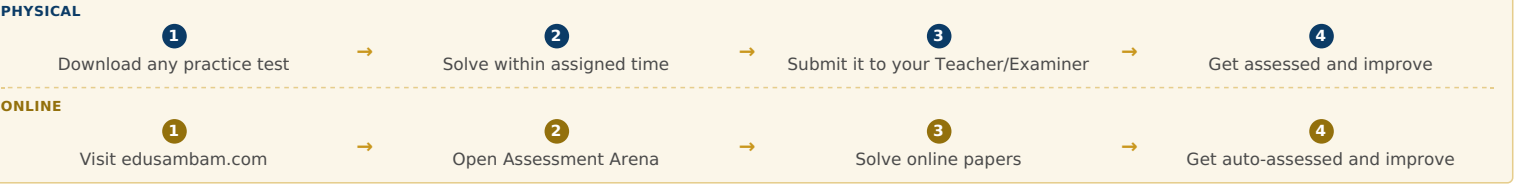
EDUSAMBAM ASSESSMENT SERIES

Ratio & Percentages

PRINTABLE PRACTICE WORKSHEET

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YOUR PHYSICAL & ONLINE SELF-ASSESSMENT ROADMAP



Candidate Name:		Roll No.:	
Class / Grade:		Date:	
School / Institution:		Test Centre:	

Subject	Mathematics (Maths)	Topic	Ratio & Percentages	Total Marks	100
Total Questions	45	Time Allowed	1 Hour (60 minutes)	Version	A

GENERAL INSTRUCTIONS

- Read each question carefully before answering.
- For Section A and Section B, mark one answer only.
- For Sections C and E, write your answer clearly in the space provided.
- For Section D, write the correct letter from Column B against each item in Column A.
- Do not use correction fluid. Keep all answers clear and legible.
- This worksheet is prepared from the EDUSAMBAM practice assessment supplied for this paper.

PAPER PATTERN

Section	Questions	Marks Each	Total
Section A — Multiple Choice	15	2	30
Section B — True / False	10	2	20
Section C — Fill in the Blank	10	2	20
Section D — Column Matching	5 pairs	2	10
Section E — Short Answer	5	4	20
Total	45	—	100

Section A — Multiple Choice

30 marks

1. A ratio compares:

A. Two or more quantities of the same kind

B. Only colors

C. Only shapes

D. Nothing measurable

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

2. The ratio 2:4 can be simplified to:

A. 1:2

B. 2:4 cannot be simplified

C. 4:2

D. 1:4

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

3. A proportion states that:

A. Two ratios are equal

B. Two ratios are always different

C. A ratio equals zero

D. A ratio has only one term

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

4. If a:b = c:d, this is an example of a:

A. Proportion

B. Percentage

C. Discount

D. Exponent

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

5. A percentage represents a value:

A. Out of 100

B. Out of 10

C. Out of 1000

D. Out of 1

Answer: ☐A ☐B ☐C ☐D

Intermediate • 2 pts

6. 50% is equivalent to which fraction? A. 1/2 C. 1/5 Answer: ☐ A ☐ B ☐ C ☐ D	B. 1/4 D. 3/4	Intermediate • 2 pts
7. To find the average of a set of numbers, you: A. Add them all and divide by how many numbers there are C. Subtract the smallest from the largest Answer: ☐ A ☐ B ☐ C ☐ D	B. Multiply them all together D. Divide the largest by the smallest	Intermediate • 2 pts
8. Profit occurs when: A. The selling price is higher than the cost price C. The selling price is lower than the cost price Answer: ☐ A ☐ B ☐ C ☐ D	B. The selling price equals the cost price D. There is no cost price	Intermediate • 2 pts
9. Loss occurs when: A. The selling price is higher than the cost price C. There is no selling price Answer: ☐ A ☐ B ☐ C ☐ D	B. The selling price is lower than the cost price D. The cost price is zero	Intermediate • 2 pts
10. A discount is: A. An increase added to the original price C. Always equal to the original price Answer: ☐ A ☐ B ☐ C ☐ D	B. A reduction from the original price D. Unrelated to price	Intermediate • 2 pts
11. Simple interest is calculated based on: A. The original principal amount only C. The buyer's age Answer: ☐ A ☐ B ☐ C ☐ D	B. A random guess D. The color of the currency	Intermediate • 2 pts
12. Which formula represents percentage calculation? A. (Part / Whole) × 100 C. Whole – Part Answer: ☐ A ☐ B ☐ C ☐ D	B. Part + Whole D. Part ÷ 100 × Whole	Advanced • 2 pts
13. If a ratio is written as 3:5, the total number of equal parts is: A. 3 C. 8 Answer: ☐ A ☐ B ☐ C ☐ D	B. 5 D. 15	Advanced • 2 pts
14. An increase in price expressed as a percentage of the original price is called a: A. Percentage increase C. Ratio decrease Answer: ☐ A ☐ B ☐ C ☐ D	B. Percentage decrease D. Proportion loss	Advanced • 2 pts
15. Ratio and proportion problems are commonly used to solve real-world situations like: A. Scaling recipes or mixing ingredients in the correct amounts C. Naming a book Answer: ☐ A ☐ B ☐ C ☐ D	B. Painting a picture D. Writing a song	Advanced • 2 pts

Section B — True / False

20 marks

16. A ratio compares two or more quantities of the same kind. A. True ☐ B. False ☐	Basic • 2 pts
17. A proportion states that two ratios are equal. A. True ☐ B. False ☐	Basic • 2 pts
18. The ratio 2:4 is already in its simplest form. A. True ☐ B. False ☐	Basic • 2 pts
19. A percentage represents a value out of 100. A. True ☐ B. False ☐	Basic • 2 pts
20. 50% is equivalent to the fraction 1/2. A. True ☐ B. False ☐	Intermediate • 2 pts
21. Profit occurs when the selling price is lower than the cost price. A. True ☐ B. False ☐	Intermediate • 2 pts

22. A discount is a reduction from the original price.
A. True ☐ B. False ☐

23. To find an average, you add all the numbers and divide by how many there are.
A. True ☐ B. False ☐

24. Simple interest is calculated based on the original principal amount.
A. True ☐ B. False ☐

25. Ratio and proportion have no real-world applications, like scaling recipes.
A. True ☐ B. False ☐

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Section C — Fill in the Blank

20 marks

26. A comparison between two or more quantities of the same kind is called a _____.
Answer: _____

27. When two ratios are equal, this is called a _____.
Answer: _____

28. A value expressed out of 100 is called a _____.
Answer: _____

29. Adding a set of numbers and dividing by how many there are gives you the _____.
Answer: _____

30. When the selling price is higher than the cost price, the result is a _____.
Answer: _____

31. When the selling price is lower than the cost price, the result is a _____.
Answer: _____

32. A reduction from the original price of an item is called a _____.
Answer: _____

33. Money earned or paid based on a principal amount over time is called _____.
Answer: _____

34. The formula for percentage is (Part / Whole) × _____.
Answer: _____

35. Ratio and proportion are commonly used to scale _____, like adjusting ingredient amounts.
Answer: _____

Basic • 2 pts

Basic • 2 pts

Basic • 2 pts

Basic • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Intermediate • 2 pts

Section D — Column Matching

10 marks

36-40. Match each term to its correct definition.

Column A	Answer	Column B
Ratio	_____	A. A value expressed out of 100
Proportion	_____	B. The result when selling price is higher than cost price
Percentage	_____	C. A reduction from the original price
Profit	_____	D. A comparison of two or more quantities of the same kind
Discount	_____	E. A statement that two ratios are equal

Section E — Short Answer

20 marks

41. Explain the difference between a ratio and a proportion.

42. How do you calculate the average of a set of numbers?

Advanced • 4 pts

Advanced • 4 pts

43. Explain the difference between profit and loss.

Advanced · 4 pts

44. How is a discount calculated on an item's price?

Advanced · 4 pts

45. Give a real-life example where ratio and proportion would be useful.

Advanced · 4 pts

Candidate Signature: _____ **Invigilator Signature:** _____

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Marks Obtained: _____ / 100

Checked By: _____

Result / Grade: _____

Date Checked: _____

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Ratio & Percentages — Answer Key

Teacher reference: equivalent grammatically correct wording is acceptable for open-ended items when the meaning is preserved.

Section A — Multiple Choice

- | | |
|------|-------|
| 1. A | 9. B |
| 2. A | 10. B |
| 3. A | 11. A |
| 4. A | 12. A |
| 5. A | 13. C |
| 6. A | 14. A |
| 7. A | 15. A |
| 8. A | |

Section B — True / False

- | | |
|-----------|-----------|
| 16. True | 21. False |
| 17. True | 22. True |
| 18. False | 23. True |
| 19. True | 24. True |
| 20. True | 25. False |

Section C — Fill in the Blank

- | | |
|----------------|--------------|
| 26. ratio | 31. loss |
| 27. proportion | 32. discount |
| 28. percentage | 33. interest |
| 29. average | 34. 100 |
| 30. profit | 35. recipes |

Section D — Column Matching

- | | |
|--------------------|------------------|
| 36. Ratio — D | 39. Profit — B |
| 37. Proportion — E | 40. Discount — C |
| 38. Percentage — A | |

Section E — Short Answer (Model Answers)

- 41.** compare; equal; two ratio
- 42.** add; sum; divide; total
- 43.** selling price; cost price; higher; lower
- 44.** reduce; percentage; original price; subtract
- 45.** recipe; scale; mix; map; model