

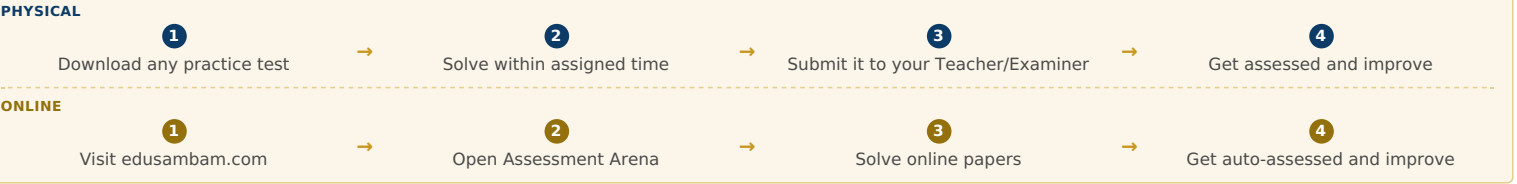
EDUSAMBAM ASSESSMENT SERIES

Powers & Roots

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	Powers & Roots	Total Marks	100
Total Questions	45	Time Allowed	1 Hour (60 minutes)	Version	A

GENERAL INSTRUCTIONS

1. Read each question carefully before answering.
2. For Section A and Section B, mark one answer only.
3. For Sections C and E, write your answer clearly in the space provided.
4. For Section D, write the correct letter from Column B against each item in Column A.
5. Do not use correction fluid. Keep all answers clear and legible.
6. 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. The square of a number is the number multiplied by:

A. Itself once

B. Zero

C. 10

D. Its reciprocal

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

2. What is the square of 5?

A. 10

B. 15

C. 25

D. 55

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

3. The square root of a number is:

A. A value that, when multiplied by itself, gives the original number

B. Always the number divided by 2

C. Always negative

D. Always larger than the original number

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

4. What is the square root of 49?

A. 6

B. 7

C. 8

D. 24.5

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

5. The cube of a number is the number multiplied by itself:

A. Once

B. Twice (three times total)

C. Zero times

D. Ten times

Answer: ☐A ☐B ☐C ☐D

Intermediate • 2 pts

6. What is the cube of 2?

A. 4

B. 6

C. 8

D. 9

Answer: ☐A ☐B ☐C ☐D

7. The cube root of a number is:

A. A value that, when multiplied by itself three times, gives the original number

B. Always equal to the square root

C. Always negative

D. Always equal to the number itself

Answer: ☐A ☐B ☐C ☐D

8. What is the cube root of 27?

A. 2

B. 3

C. 9

D. 13.5

Answer: ☐A ☐B ☐C ☐D

9. An exponent tells you:

A. How many times to multiply a base number by itself

B. How many times to divide

C. The color of the number

D. The square root only

Answer: ☐A ☐B ☐C ☐D

10. In the expression 3^4, the number 4 is called the:

A. Base

B. Exponent

C. Root

D. Coefficient

Answer: ☐A ☐B ☐C ☐D

11. In the expression 3^4, the number 3 is called the:

A. Exponent

B. Base

C. Power result

D. Root

Answer: ☐A ☐B ☐C ☐D

12. According to the laws of indices, when multiplying powers with the same base, you should:

A. Add the exponents

B. Multiply the exponents

C. Subtract the exponents

D. Ignore the exponents

Answer: ☐A ☐B ☐C ☐D

13. According to the laws of indices, when dividing powers with the same base, you should:

A. Multiply the exponents

B. Subtract the exponents

C. Add the exponents

D. Square the exponents

Answer: ☐A ☐B ☐C ☐D

14. Any non-zero number raised to the power of 0 equals:

A. 0

B. 1

C. The number itself

D. Undefined

Answer: ☐A ☐B ☐C ☐D

15. According to the laws of indices, raising a power to another power means you should:

A. Multiply the exponents

B. Add the exponents

C. Subtract the exponents

D. Divide the exponents

Answer: ☐A ☐B ☐C ☐D

Section B — True / False

20 marks

16. The square of a number is the number multiplied by itself once.

A. True ☐

B. False ☐

17. The square root of a number, when multiplied by itself, gives the original number.

A. True ☐

B. False ☐

18. The cube of a number involves multiplying it by itself three times total.

A. True ☐

B. False ☐

19. The cube root of 27 is 9.

A. True ☐

B. False ☐

20. An exponent tells you how many times to multiply the base by itself.

A. True ☐

B. False ☐

21. In the expression 5^2, the number 5 is the exponent.

A. True ☐

B. False ☐

22. When multiplying powers with the same base, you add the exponents.
A. True ☐ **B.** False ☐

23. When dividing powers with the same base, you subtract the exponents.
A. True ☐ **B.** False ☐

24. Any non-zero number raised to the power of 0 equals 1.
A. True ☐ **B.** False ☐

25. Raising a power to another power means you should add the exponents.
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. Multiplying a number by itself once gives you its _____.
Answer: _____

27. A value that, when multiplied by itself, gives the original number is called a _____ root.
Answer: _____

28. Multiplying a number by itself three times total gives you its _____.
Answer: _____

29. A value that, when multiplied by itself three times, gives the original number is called a _____ root.
Answer: _____

30. A small number showing how many times to multiply a base by itself is called an _____.
Answer: _____

31. In the expression 2^5, the number 2 is called the _____.
Answer: _____

32. When multiplying powers with the same base, you should _____ the exponents.
Answer: _____

33. When dividing powers with the same base, you should _____ the exponents.
Answer: _____

34. Any non-zero number raised to the power of 0 equals _____.
Answer: _____

35. When raising a power to another power, you should _____ the exponents.
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
Square	_____	A. A number multiplied by itself three times total
Square Root	_____	B. Shows how many times to multiply the base by itself
Cube	_____	C. The number being multiplied repeatedly in a power expression
Exponent	_____	D. A number multiplied by itself once
Base	_____	E. A value that, multiplied by itself, gives the original number

Section E — Short Answer

20 marks

41. Explain the difference between a square and a square root.

42. What is the cube of a number, and how is it calculated?

Advanced • 4 pts

Advanced • 4 pts

43. Explain what an exponent tells you in an expression like 4^3 .Advanced · 4 pts

44. State the rule for multiplying powers with the same base.4 pts

45. State the rule for dividing powers with the same base.4 pts

Candidate Signature: Invigilator Signature:

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Marks Obtained: / 100

Checked By:

Result / Grade:

Date Checked:

EDUSAMBAM ASSESSMENT SERIES

Powers & Roots — 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

2. C

3. A

4. B

5. B

6. C

7. A

8. B
9. A

10. B

11. B

12. A

13. B

14. B

15. A

Section B — True / False

16. True

17. True

18. True

19. False

20. True
21. False

22. True

23. True

24. True

25. False

Section C — Fill in the Blank

26. square

27. square

28. cube

29. cube

30. exponent
31. base

32. add

33. subtract

34. 1

35. multiply

Section D — Column Matching

36. Square — D

37. Square Root — E

38. Cube — A
39. Exponent — B

40. Base — C

Section E — Short Answer (Model Answers)

41. multiply; itself; reverse; opposite

42. multiply; itself; three times

43. how many times; multiply; base; power

44. add; exponent; same base

45. subtract; exponent; same base