BRITISH COLUMBIA FOUNDATIONS OF MATHEMATICS AND PRE-CALCULUS 10 (MFMP-10) · UNIT A · 25 QUESTIONS

Number, Powers and Roots — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The value of 2^{-3} is**



A -8

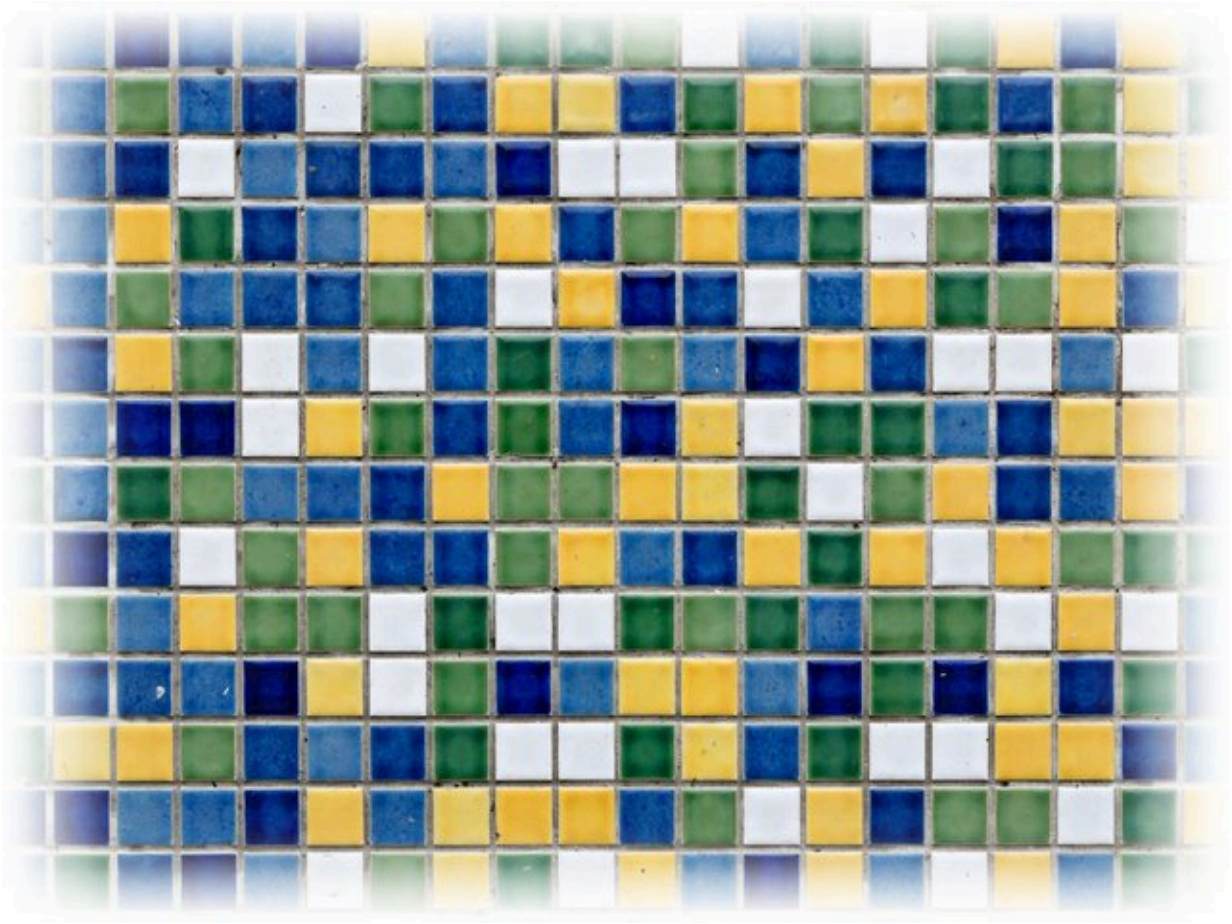
B $-\frac{1}{8}$

C $\frac{1}{8}$

D 8

Understand It with Pulse | Flag a mistake

2 **The value of $\sqrt{144}$ is ____.**



ANSWER

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3 **The greatest common factor of 48 and 180 is**

A 6

B 24

C 12

D 36

Understand It with Pulse | Flag a mistake

4 **The least common multiple of 12 and 18 is**

A 36

B 54

C 72

D 24

Understand It with Pulse | Flag a mistake

5 **The prime factorization of 72 is**



A $2^2 \cdot 3^3$

B $2^3 \cdot 3^2$

C $2^4 \cdot 3$

D $2 \cdot 3^4$

Understand It with Pulse | Flag a mistake

6 **If $3^x = 81$, then the value of x is ____.**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The diagram shows how many numbers are multiples of 3 and multiples of 5. The number of values that are multiples of 3 but not of 5 is**

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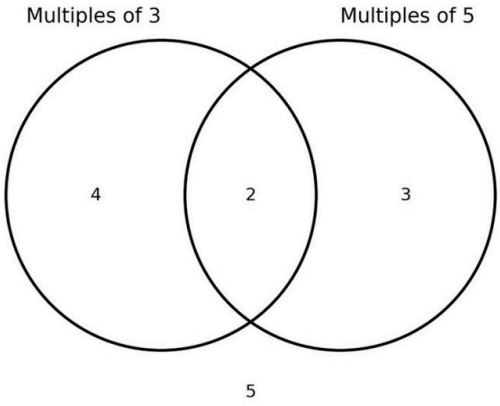

Question 7

The diagram shows how many numbers are multiples of 3 and multiples of 5. The number of values that are multiples of 3 but not of 5 is

A) 4

B) 2

C) 3

D) 6

A 4

B 2

C 3

D 6

A 4

B 2

C 3

D 6

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8 **The diagram shows how many numbers are multiples of 4 and multiples of 6. The total number of values that are multiples of 4 or of 6 is**

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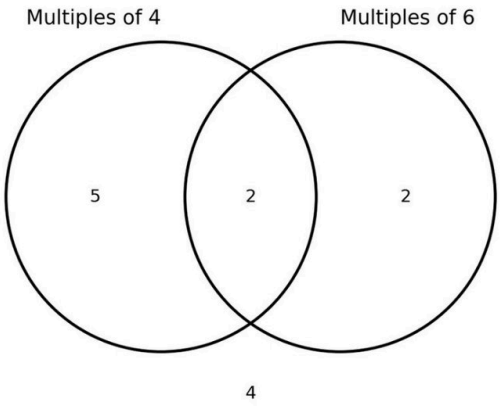

Question 8

The diagram shows how many numbers are multiples of 4 and multiples of 6. The total number of values that are multiples of 4 or of 6 is

A) 5
B) 9
C) 7
D) 11

A 5
B 9
C 7
D 11

A 5
B 9
C 7

D 11

Understand It with Pulse | Flag a mistake

9 The graph shows $y = 2^x$. The value of y when x = 3 is

A 6

B 9

C 8

D 5

Understand It with Pulse | Flag a mistake

10 The numbers $\sqrt{2}$, 1.5, $\sqrt{3}$, and 2, written in increasing order, are

A $\sqrt{3}, \sqrt{2}, 1.5, 2$

B $\sqrt{2}, 1.5, \sqrt{3}, 2$

C $1.5, \sqrt{2}, 2, \sqrt{3}$

D $\sqrt{2}, \sqrt{3}, 1.5, 2$

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11 The prime factorization of 360 is $2^3 \cdot 3^2 \cdot 5$. The number of prime factors of 360, counting repeats, is ____.

ANSWER _____

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12 The value of $\left(\frac{3}{4}\right)^{-1}$ is

A $\frac{4}{3}$

B $-\frac{3}{4}$

C $\frac{3}{4}$

D $-\frac{4}{3}$

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13 **The value of $\sqrt{90}$ lies between**

A 8 and 9

B 9 and 10

C 10 and 11

D 7 and 8

Understand It with Pulse | Flag a mistake

14 **Two ribbons are 36 cm and 48 cm long. They are cut into equal pieces as long as possible, with no ribbon left over. The length of each piece, in centimetres, is ____.**



ANSWER _____

Understand It with Pulse | Flag a mistake

15 When simplified and written with positive exponents, $\frac{10x^3y^{-1}}{2x^{-2}y^2}$ is equal to

A $\frac{5x}{y^3}$

B $\frac{5x^5}{y^3}$

C $\frac{5x^5}{y}$

D $5x^5y^3$

Understand It with Pulse | Flag a mistake

16 When simplified, $\frac{a^2b^3}{ab}$ is equal to

A ab^2

B a^2b^2

C ab^3

D a^3b^2

Understand It with Pulse | Flag a mistake

17 **When simplified, $(2x^3)^2$ is equal to**

- **A** $2x^5$
- **B** $4x^6$
- **C** $4x^5$
- **D** $2x^6$

Understand It with Pulse | Flag a mistake

18 **When written as a mixed radical in simplest form, $\sqrt{50}$ is equal to**

- **A** $2\sqrt{5}$
- **B** $5\sqrt{2}$
- **C** $25\sqrt{2}$
- **D** $5\sqrt{10}$

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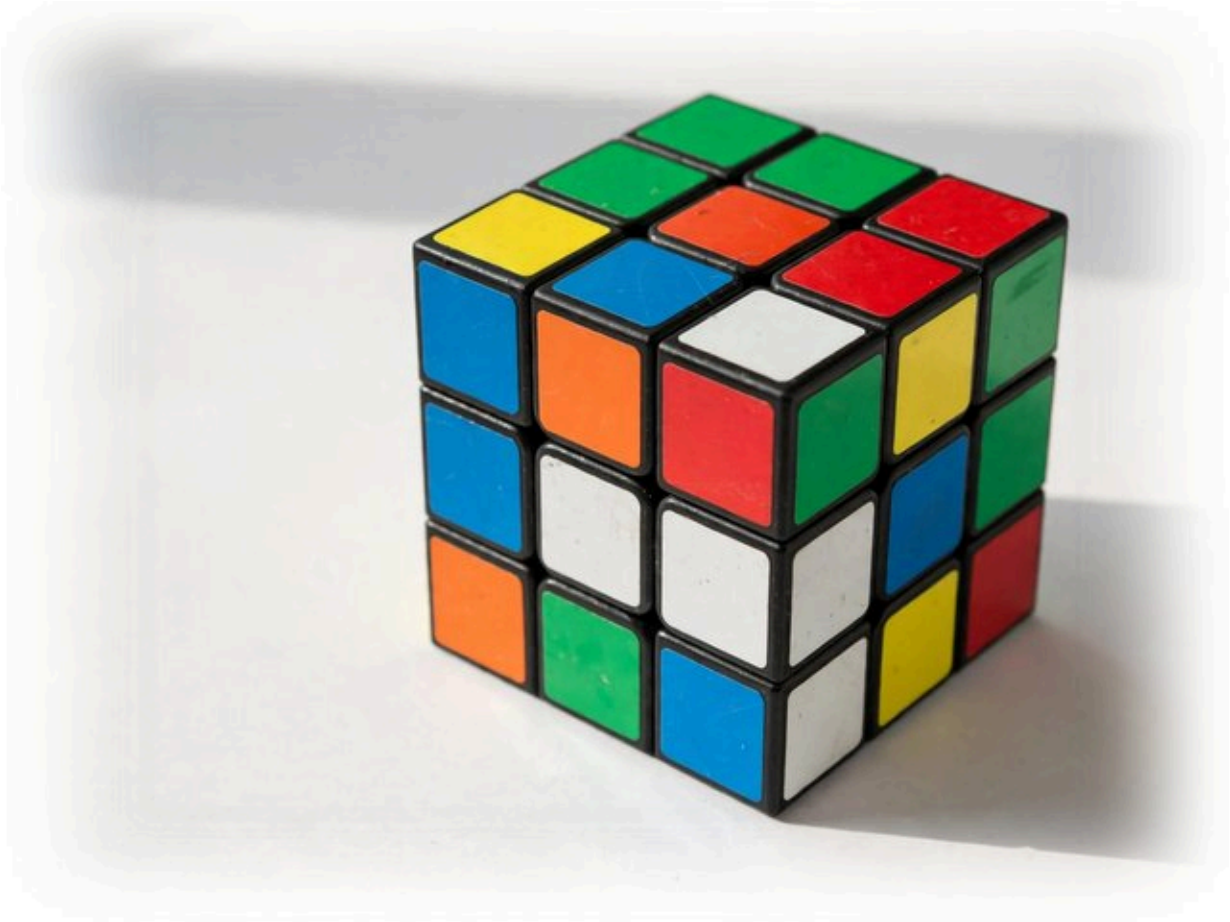
19 The value of $27^{2/3}$ is ____.



ANSWER _____

Understand It with Pulse | Flag a mistake

20 The value of $\sqrt[3]{216}$ is ____.

ANSWER _____

Understand It with Pulse | Flag a mistake

21 The greatest common factor of 54 and 90 is

- A 9
- B 18
- C 27
- D 6

Understand It with Pulse | Flag a mistake

22 The least common multiple of 15 and 20 is

- A 60
- B 35
- C 300
- D 45

Understand It with Pulse | Flag a mistake

23 **The prime factorization of 126 is**



A $2 \cdot 3^2 \cdot 7$

B $2^2 \cdot 3 \cdot 7$

C $2 \cdot 3 \cdot 7^2$

D $6 \cdot 21$

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24 The value of $16^{3/4}$ is

A 12

B 64

C 4

D 8

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25 The value of $\sqrt[3]{-125}$ is ____.

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. 12
3. C
4. A
5. B
6. 4
7. A
8. B
9. C
10. B
11. 6
12. A
13. B
14. 12
15. B
16. A
17. B
18. B
19. 9
20. 6
21. B
22. A
23. A
24. D
25. -5

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