YUKON PRE-CALCULUS 11 (MPREC11) · UNIT A · 25 QUESTIONS

Real Numbers, Powers and Radicals — 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 **Which of the following numbers is irrational?**

- **A** $\sqrt{16}$
- **B** 0.25
- **C** $\sqrt{3}$
- **D** $\frac{3}{7}$

Understand It with Pulse | Flag a mistake

2 **Which of the following numbers is rational?**

- A $\sqrt{49}$
- B π
- C $\sqrt{2}$
- D 0.1010010001...

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3 **The value of 2^5 is**

- A 16
- B 32
- C 64
- D 10

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4 The value of $(-3)^3$ is

- A -27
- B 27
- C -9
- D 9

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5 The value of 5^0 is

- A 0
- B 5
- C 1
- D -5

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

- **A** -9
- **B** 9
- **C** $\frac{1}{9}$
- **D** $-\frac{1}{9}$

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7 **The product $(2^3)(2^4)$ written as a single power is**

- **A** 2^7
- **B** 2^{12}
- **C** 4^7
- **D** 2^1

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8 The power $(5^2)^3$ written as a single power is

- A 5^5
- B 5^6
- C 5^2
- D 5^3

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9 The value of $16^{1/2}$ is

- A 8
- B 4
- C 2
- D 32

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10 The value of $27^{1/3}$ is

- A 9
- B 3
- C 27
- D 6

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11 The value of $8^{2/3}$ is

- A 2
- B 16
- C 4
- D 8

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

- A 4
- B 12
- C 8
- D 64

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13 The value of $32^{2/5}$ is

- A 2
- B 8
- C 16
- D 4

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14 The radical $\sqrt{50}$ written in simplest form is

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

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15 The radical $\sqrt{72}$ written in simplest form is

- A $3\sqrt{8}$
- B $6\sqrt{2}$
- C $2\sqrt{6}$
- D $8\sqrt{3}$

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16 The sum $\sqrt{12} + \sqrt{27}$ in simplest form is

A $5\sqrt{3}$

B $2\sqrt{3}$

C $3\sqrt{3}$

D $\sqrt{39}$

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17 The difference $\sqrt{50} - \sqrt{8}$ in simplest form is

A $2\sqrt{2}$

B $3\sqrt{2}$

C $4\sqrt{2}$

D $\sqrt{42}$

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18 The product $\sqrt{3} \cdot \sqrt{12}$ in simplest form is

- A 3
- B 6
- C $\sqrt{15}$
- D 36

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19 The quotient $\frac{\sqrt{20}}{\sqrt{5}}$ in simplest form is

- A 4
- B 2
- C $\sqrt{4}$
- D $\sqrt{15}$

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20 The fraction $\frac{1}{\sqrt{3}}$ with a rational denominator is

- A $\frac{\sqrt{3}}{3}$
- B $\sqrt{3}$
- C $\frac{3}{\sqrt{3}}$
- D $\frac{1}{3}$

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21 The fraction $\frac{5}{\sqrt{2}}$ with a rational denominator is

- A $\frac{5\sqrt{2}}{2}$
- B $\frac{\sqrt{2}}{5}$
- C $5\sqrt{2}$
- D $\frac{5}{2}$

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22 The fraction $\frac{6}{\sqrt{3}}$ with a rational denominator is

- A $\sqrt{3}$
- B $2\sqrt{3}$
- C $6\sqrt{3}$
- D $3\sqrt{3}$

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23 For $y = \sqrt{x}$, the value of y when x = 4 is

- A 1
- B 2
- C 4
- D 16

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24 For $y = 2^x$, the value of y when x = 3 is

- A 6
- B 4
- C 9
- D 8

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25 The value of $64^{2/3}$ is ____.

ANSWER _____

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ANSWER KEY

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

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