

MODULE
14

Rational Exponents and Radicals

Module Quiz: Modified

1. Which is equal to $144^{\frac{1}{2}}$?

- A 10
- B 11
- C 12

3. Which expression equals 3?

- A $16^{\frac{1}{2}}$
- B $27^{\frac{1}{3}}$
- C $125^{\frac{1}{3}}$

4. What is $81^{\frac{1}{2}} + 64^{\frac{1}{3}}$ simplified?

- A 13
- B 17
- C 145

5. What is $x^{\frac{1}{2}} \cdot x^{\frac{3}{2}}$ simplified?

- A $\frac{1}{x}$
- B x
- C x^2

6. Rewrite the expression $\sqrt[3]{11}$ using an exponent.

7. What exponent makes the statement $9^{\square} = 3$ true?

8. Simplify $49^{\frac{1}{2}} \times 8^{\frac{1}{3}}$.

9. Which is equivalent to $\sqrt[2]{36} + 16^{\frac{1}{2}}$?

- A 10
- B 14
- C 22

10. Which expression is equivalent to $b^p \cdot b^e$?

- A b^{pe}
- B $b^p + b^e$
- C b^{p+e}

11. In which set does $\sqrt{2}$ belong?

- A Whole numbers
- B Rational numbers
- C Irrational numbers

12. Which set includes no irrational numbers?

- A $\left\{0, \frac{3}{5}, -5\right\}$
- B $\{3, \pi, 4\}$
- C $\{-1, 0, \sqrt{5}\}$

13. Simplify $\frac{2x^5}{2x^3}$ using the properties of exponents.