

Module 7 Confirmation Test Review

1. Write in expanded form

- a. 3^{-4}
- b. 7^{-2}

2. Simplify the expression and write the result in fraction form.

- a. 4^4
- b. 4^3
- c. 4^2
- d. 4^1
- e. 4^0
- f. 4^{-1}
- g. 4^{-2}
- h. 4^{-3}
- i. 4^{-4}

3. Compare the numbers.

- a. Which is larger $7,890,000,000$ or 7.89×10^8 ?
- b. Which is smaller 0.000000324 or 3.24×10^{-6} ?

4. Write 9.41×10^8 in standard notation.

5. Write -0.000059 in scientific notation.

Simplify using the laws of exponents.

6. $(9x^{-5}y^{-3})^{-2}$

7. $\left(\frac{64a^3b^2}{4ab^2}\right)^{-2}$

8. $(2rs^2t^3)^2(-6r^2st^3)^3$

9. $\frac{(-2x^2y)^3}{(6xy^2)^2}$

Perform the indicated polynomial operations.

10. Add $(3x^2 + 4x - 5)$ and $(-5x^2 - 4x + 7)$

11. Subtract $(3x^5 - 2x^3 + 10)$ from $(4x^4 + 2x^3 - 6x + 12)$

12. $(2x + 5)(3x - 4)$

13. $(5x^2 - 3)(2x^2 + 6x - 7)$

14. $(4x - 5)^2$

Factor completely.

15. $64x^2 - 121y^2$

16. $25x^2 - 70x + 49$

17. $2x^2 - 12x - 110$

18. $3x^3 - 2x^2 - 21x$

1. a) $\frac{1}{8} \cdot \frac{1}{8} \cdot \frac{1}{8} \cdot \frac{1}{8}$ b) $\frac{1}{7} \cdot \frac{1}{7}$

2. a) 256 b) 64 c) 16 d) 4 e) 1 f) $\frac{1}{4}$ g) $\frac{1}{16}$ h) $\frac{1}{64}$ i) $\frac{1}{256}$

3. a) 7,890,000,000 b) 0.000000324

4. 941,000,000

5. -5.9×10^{-5}

6. $\frac{x^{10}y^6}{81}$

7. $\frac{1}{256a^4}$

8. $-864r^8s^7t^{15}$

9. $\frac{-2x^4}{9y}$

10. $-2x^2 + 2$

11. $-3x^5 + 4x^4 + 4x^3 - 6x + 2$

12. $6x^2 + 7x - 20$

13. $10x^4 + 30x^3 - 41x^2 - 18x + 21$

14. $16x^2 - 40x + 25$

15. $(8x + 11y)(8x - 11y)$

16. $(5x - 7)^2$

17. $2(x - 11)(x + 5)$

18. $x(3x + 7)(x - 3)$