

Term 1 Review

1. I CAN classify real numbers. _____/4

a. Why is $2.\overline{45}$ a rational number? _____

b. Why is $\sqrt{12}$ an irrational number? _____

Circle the number sets that include the following numbers.

c. $\frac{10}{2}$ **Natural Whole Integer Rational Irrational Real**

d. 0.1121231234 ... **Natural Whole Integer Rational Irrational Real**

2. I CAN convert fractions to decimals. _____/4

Convert the following fractions to decimals.

a. $-\frac{19}{20}$ _____

b. $\frac{19}{50}$ _____

c. $13\frac{2}{9}$ _____

d. $-2\frac{6}{18}$ _____

3. I CAN convert decimals to fractions. _____/4

Convert the following decimals to fractions. Simplify if possible.

a. 0.84 _____

b. 8.1212 ... _____

c. $0.\overline{313}$ _____

d. -11.045 _____

4. I CAN evaluate small perfect square roots and small perfect cube roots _____/4

Evaluate each square or cube root.

a. $\sqrt{81} =$ _____

b. $\sqrt{121} =$ _____

c. $\sqrt[3]{27} =$ _____

d. $\sqrt[3]{125} =$ _____

5. I CAN approximate irrational numbers. _____/4

- a. What perfect square roots does $\sqrt{72}$ fall between? $\sqrt{\quad}$ & $\sqrt{\quad}$.
Simplify the perfect square roots. _____ & _____.
Approximate $\sqrt{72}$ to the nearest tenth: _____

Approximate the square root to the **nearest tenth**.

b. $\sqrt{152} \approx$ _____

6. I CAN compare and order real numbers. _____/4

Compare the two numbers by filling in the blank with $<$, $>$, or $=$

a. $-13 \square -12$

b. $6.\overline{17} \square 6.17$

c. $7 \square \sqrt{49}$

d. $\pi \square 3$

7. I CAN add and subtract integers and decimals. _____/4

a. $-14 + 3 =$ _____

b. $-3.7 + (-9.2) =$ _____

c. $10 - (-5) =$ _____

d. $-4.7 + 13.4 =$ _____

8. I CAN multiply and divide integers and decimals. _____/4

a. $-7 \times -8 =$ _____

b. $10.8 \div -7.2 =$ _____

c. $-1.4 \times -1.2 =$ _____

d. $-96 \div 12 =$ _____

9. I CAN add and subtract fractions. _____/4

a. $\frac{3}{12} + \frac{7}{12} =$ _____

b. $-\frac{9}{20} + \frac{3}{5} =$ _____

c. $5\frac{2}{3} - 2\frac{1}{6} =$ _____

d. $-5 + \frac{5}{6} =$ _____

10. I CAN multiply and divide fractions. _____/4

a. $\left(-\frac{3}{4}\right) \times \left(-\frac{7}{10}\right) =$ _____

b. $\frac{2}{9} \times \frac{9}{20} =$ _____

c. $\frac{4}{5} \div \frac{8}{15} =$ _____

d. $3\frac{1}{2} \div \frac{5}{8} =$ _____

11. I CAN simplify powers with positive exponents. _____/4

a. What is the difference between $(-7)^2$ and -7^2 ? _____

b. Write the following in simplified exponent form: $3 \cdot 3 \cdot 3 \cdot 9 \cdot 9 \cdot 9 \cdot 9 =$ _____

Evaluate the following.

c. $2^3 + 3^2 =$ _____

d. $(-4)^4 =$ _____

12. I CAN simplify powers with zero exponents. _____/4

Evaluate the following.

a. $12^2 \cdot 6^0 =$ _____

b. $-5^0 =$ _____

c. $\frac{4^0}{6^2} =$ _____

d. $(2 \cdot 8)^0 =$ _____

13. I CAN simplify powers with negative exponents. _____/4

a. Write $\frac{1}{4^{-3}}$ using a positive exponent. _____

Evaluate the following.

b. $3^{-3} =$ _____

c. $\frac{1}{7^{-2}} =$ _____

d. $2^{-2} + 3^{-1} =$ _____

14. I CAN multiply powers. _____/4

a. Complete the table.

Expression	Expanded Form	Simplified Exponent Form
$6^3 \cdot 6^4$		

b. Write $4^5 \cdot 4^6$ in simplified exponent form: _____

Evaluate the following.

c. $2^2 \cdot 2^6 =$ _____

d. $3 \cdot 3^3 =$ _____

15. I CAN divide powers. _____/4

a. Complete the table.

Expression	Expanded Form (Show your work for finding ones)	Simplified Exponent Form
$\frac{9^5}{9^2}$		

b. Write $\frac{7^2}{7^8}$ in simplified exponent form: _____

Evaluate the following.

c. $\frac{5^3}{5^6} =$ _____

d. $\frac{8^{12}}{8^{10}} =$ _____

16. I CAN simplify powers of powers. _____/4

Write the following in simplified exponent form.

a. $(4^3)^6 =$ _____

b. $(2^4 \cdot 5^2)^5 =$ _____

Evaluate the following.

c. $(3^2)^2 =$ _____

d. $\left(\frac{2^4}{3^3}\right)^2 =$ _____

17. I CAN write numbers in scientific notation and standard form. _____/3

Write the following in **Scientific Notation**.

a. 450,000,000

b. 0.0000023

Answer: _____

Answer: _____

Write the following in **Standard Form**.

c. 7.5×10^5

d. 3×10^{-4}

Answer: _____

Answer: _____

18. I CAN compare numbers written in scientific notation. _____/3

Use $>$, $<$, or $=$ to fill in the blank.

a. 2.4×10^{-3} _____ 24×10^{-3}

b. 5×10^{-5} _____ 6.2×10^{-5}

Put the list of numbers in order from least to greatest, 1 being the least, 4 being the greatest.

c. 8.6×10^5 _____

d. 332×10^{-4} _____

2.3×10^6 _____

4.3×10^{-2} _____

9.9×10^4 _____

2.7×10^{-4} _____

7.4×10^{-2} _____

1.9×10^{-1} _____

19. I CAN multiply, divide, add, and subtract numbers in scientific notation. _____/3

Evaluate each expression. Write each answer in **Scientific Notation**.

a. $(7 \times 10^2)(2.4 \times 10^{-7})$

b. $\frac{8.1 \times 10^9}{9 \times 10^{-3}}$

Answer: _____

Answer: _____

c. $(6.3 \times 10^5) + (2 \times 10^4)$

d. $(7.9 \times 10^{-2}) - (5.6 \times 10^{-3})$

Answer: _____

Answer: _____