

Principles of Math 9
Term 1 Test format

1. Simplify the following:
 - a. $4\frac{1}{2} - 3\frac{1}{7}$
 - b. $-2\frac{3}{9} + 3\frac{2}{5}$

2. Evaluate:
 - a. $8n - 7$ when $n = 4\frac{2}{3}$
 - b. $2x^2 + 7y$ when $x = -1\frac{3}{4}$ and $y = 1\frac{2}{3}$

3. Express in Scientific Notation:
 - a. 0.000 0026
 - b. 75 260

4. Simplify the following:
 - a. $10^7 / 10^{-14}$
 - b. $10^3 \times 10^{-12}$

5. Calculate the following. Express your answers in scientific notation.
 - a. $568\,000 \times 0.0062$
 - b. $(8.946 \times 10^{20}) / (2.63 \times 10^{-7})$
 - c. Ticket Master sold \$800 000 worth of concert tickets to 14 000 people. What is the average price of each ticket?

6. Simplify the following:
 - a. $4x^4 \cdot (-5x^3)$
 - b. $(-5x^3y)(-7x^2y^3)$
 - c. $6a^2 + 2a - 4b^2 - 2b + (2a^3 - 4a + 2b)$

7. Solve the following equations:
 - a. $14x + 9 = -4x - 27$
 - b. $4(2x + 1) + 2x = 3(x - 7) - 3$

8. Solve the following problem. Show all work.
 - a. Will is 3 times the age of his son. 5 years ago the sum of their ages was 38. How old are Will and his son?
 - b. Jacob has \$4.50 in quarters and dimes. He has 5 times as many dimes as quarters. How many coins of each kind does he have?

9. Find the following products:
 - a. $2x(4x^2 - 7x + 4)$
 - b. $4x^2(3x^3 - 2x^2 + 6x)$
 - c. $(2x + 7y)(4x - 3y)$
 - d. $(5a - 4)(5a + 4)$
 - e. $(4x + 3y)(4x - 3y)$