

# Assignment 1

Name \_\_\_\_\_

Student ID \_\_\_\_\_

Questions 1-44 are worth one mark each, while questions 45-55 are worth two (one mark for the correct answer and one mark for the formula used to find the answer). If more space is required to show the formula please attach papers to the assignment. The assignment must be done individually.

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

1) Simplify:  $(14 + 7)/3$  1) \_\_\_\_\_

2) Simplify:  $5(4 + 3)$  2) \_\_\_\_\_

3) Simplify:  $9(8 - 5) + 5(6 + 4)$  3) \_\_\_\_\_

4) Simplify:  $\frac{20 - 15}{15 + 5}$  4) \_\_\_\_\_

5) Simplify:  $30 + 8 \left[ \frac{6^2 - 4(3 - 1)}{4} \right] - 6$  5) \_\_\_\_\_

6) Evaluate:  $395(2 + .15 * 290/365)$  6) \_\_\_\_\_

7) Evaluate:  $\frac{268}{4400 * 156/366}$  7) \_\_\_\_\_

8) Evaluate:  $\frac{5000}{1 + .1 * 183/366}$  8) \_\_\_\_\_

9) Simplify:  $7m - 2m - 3m$  9) \_\_\_\_\_

10) Simplify:  $4x - 3y - 4x - 2y$  10) \_\_\_\_\_

11) Simplify:  $x + 0.16x$  11) \_\_\_\_\_

12) Simplify:  $3ax - 4x + 1 - 7 + 3x - 4ax$  12) \_\_\_\_\_

13) Simplify:  $-(4 - 6a) - (-8 + 6a)$  13) \_\_\_\_\_

14) Simplify:  $-9a(-5b)$  14) \_\_\_\_\_

15) Simplify:  $-6m(-3m)$  15) \_\_\_\_\_

- 16) Simplify:  $-2a(-3b)(-4c)(-5)$  16) \_\_\_\_\_
- 17) Simplify:  $8(9y - 4) - 2(y - 1) - (1 - 3y)$  17) \_\_\_\_\_
- 18) Simplify:  $(5m - 2n)(m - 12n)$  18) \_\_\_\_\_
- 19) Simplify:  $2(a - 1)(7a - 3) - 3(6a - 2)(2a + 1)$  19) \_\_\_\_\_
- 20) Simplify:  $50xy \div (-5x)$  20) \_\_\_\_\_
- 21) Simplify:  $50xy \div (-5x)$  21) \_\_\_\_\_
- 22) Evaluate:  $4x^2 - 10xy - 8y^2$  for  $x = -3, y = 5$  22) \_\_\_\_\_
- 23) Evaluate  $y$ :  $y = \frac{1}{2}(3x^2 - x - 1) - \frac{1}{4}(5 - 2x - x^2)$  for  $x = -3$  23) \_\_\_\_\_
- 24) Evaluate R:  $R = \frac{I}{PT}$  for  $I = 83, P = 845, T = \frac{216}{360}$  24) \_\_\_\_\_
- 25) Evaluate  $p$ :  $p = s \left[ 1 - r * \frac{t}{360} \right]$ , where  $s = 3120, r = 0.123, t = 295$  25) \_\_\_\_\_
- 26) Evaluate:  $(-1)^{14}$  26) \_\_\_\_\_
- 27) Evaluate:  $-(288888)^0$  27) \_\_\_\_\_
- 28) Simplify:  $\frac{(x^{16})(x^4)}{x^2}$  28) \_\_\_\_\_
- 29) Simplify:  $(1 - r)^3(1 - r)^4(1 - r)$  29) \_\_\_\_\_
- 30) Simplify:  $\left[ \frac{a^5 b^6}{x} \right]^3$  30) \_\_\_\_\_
- 31) Compute:  $\sqrt{205.9225}$  31) \_\_\_\_\_
- 32) Compute:  $\sqrt[12]{1.126825}$  32) \_\_\_\_\_
- 33) Compute:  $1956^{2/5}$  33) \_\_\_\_\_
- 34) Compute:  $1.28^{-5/14}$  34) \_\_\_\_\_

35) Compute the value of  $\frac{1 - 1.025^{-25}}{0.0295}$

35) \_\_\_\_\_

36) Solve:  $8x = 40$

36) \_\_\_\_\_

37) Solve:  $-\frac{4}{3}x = -49$

37) \_\_\_\_\_

38) Solve:  $3x = 9 + 12x$

38) \_\_\_\_\_

39) Solve:  $51 - 14x = -34 - x$

39) \_\_\_\_\_

40) Solve:  $5(2x - 4) - 3(1 - 3x) = -64$

40) \_\_\_\_\_

41) Solve:  $\frac{14}{5}(4 - 3x) + \frac{23}{40} = \frac{7}{10}x - \frac{3}{8}(2x - 3)$

41) \_\_\_\_\_

42) Solve:  $\frac{(R+r)}{r} = \frac{V}{v}$  for  $V$

42) \_\_\_\_\_

43) Solve:  $I = Prt$  for  $t$

43) \_\_\_\_\_

44) Solve:  $\frac{a+b}{b} = \frac{c}{d}$  for  $b$

44) \_\_\_\_\_

- 45) Spade Realty sold lots for \$23240 per hectare. What is the total sales value if the lot sizes, in hectares, were  $2\frac{1}{2}$ ,  $3\frac{1}{4}$ ,  $4\frac{1}{5}$ ? 45) \_\_\_\_\_
- 46) Three mechanics worked  $15\frac{1}{2}$ ,  $14\frac{3}{4}$ ,  $18\frac{1}{8}$  hours respectively. What was the total cost of labor if the mechanics were paid \$14.75 per hour? 46) \_\_\_\_\_
- 47) Three workers worked  $10\frac{1}{2}$ ,  $15\frac{3}{5}$ ,  $20\frac{1}{4}$  hours respectively. What was the total cost of labor if the workers were paid \$20.00 per hour? 47) \_\_\_\_\_
- 48) Conor had to pay income taxes of \$3440.00 plus 22% of the amount by which his taxable income exceeded \$36 000.00. If his tax bill was \$3684.00, calculate his taxable income. 48) \_\_\_\_\_
- 49) Bow Valley Electronics sold a mini stereo set during a sale for \$776. Determine the regular selling price of the set if the price of the set had been reduced by  $\frac{1}{4}$  of the original regular selling price. 49) \_\_\_\_\_
- 50) The zinc department of a factory occupies 500 square metres more than 2 times the floor space occupied by the copper department. The total floor space is 9500 square metres. Determine the floor space occupied by the cooper department. 50) \_\_\_\_\_
- 51) After reducing the regular selling price by  $\frac{1}{7}$ , Moon Electronics sold a TV set for \$294. What was the regular selling price? 51) \_\_\_\_\_
- 52) A machine requires 4 hours to make a unit of Product A and 7 hours to make a unit of Product B. The machine operated for 810 hours producing a total of 150 units. How many units of Product B were produced? 52) \_\_\_\_\_
- 53) A company employs 204 employees. There are three shifts. There are three times as many on the first shift as on the second shift, and four more on the third shift than on the second shift. Determine how many were on each shift. 53) \_\_\_\_\_
- 54) A rubber tube 120 cm long is cut into two pieces so that the longer piece is 30 cm longer than twice the length of the shorter piece. What is the length of the longer piece? 54) \_\_\_\_\_
- 55) Extend each of the following and determine the total. 55) \_\_\_\_\_

<i>Quantity</i>	<i>Unit Price</i>
48	\$2.45
48	$\$0.83\frac{1}{8}$
16	\$2.12
60	$\$1.33\frac{1}{6}$