

PART A: 1 mark each

1. Evaluate exactly. **(SHOW WORK)** (7 marks)
 Leave answers in whole number or reduced fraction form. No decimals!

a) $4 - 3 \times 5 + (1 - 2)^2$ a) _____

b) $\frac{\sqrt{81} - 7 + 1}{1 + 2^3}$ b) _____

c) $(-2)(-4) + (-1)(5)$ c) _____

d) $1\frac{2}{3} \div \frac{6}{7}$ d) _____

e) $\frac{2}{3} + \frac{3}{5} - \frac{1}{2}$ e) _____

f) $1\frac{1}{8} - \frac{3}{8} \times \frac{4}{5}$ f) _____

g) $2\left(\frac{2}{3}\right) - 3\left(\frac{2}{3}\right)$ g) _____

2. Convert the following fractions to decimals. **(NO WORK)** (2 marks)

a) $\frac{2}{5}$

a) _____

b) $-3\frac{3}{8}$

b) _____

3. Simplify completely. **(NO WORK)** (4 marks)

a) $5(2m - 3)$

b) $7c - 8 - 3c + 10$

c) $5(1 - 4m) - 2(3m - 4)$

d) $x^2y(2x^2 + 3xy - y^2)$

4. Determine each square root. **(NO WORK)** (2 marks)

a) $\sqrt{\frac{144}{25}}$ (leave as fraction)

a) _____

b) $\sqrt{1.69}$

b) _____

5. Write as a power and then evaluate. (2 answers for each question) (2 marks)

a) $-(2^3)^3$

a) _____

b) $(6^2)^0$

b) _____

PART B: 2 marks each. Show your work for full marks.

6. Evaluate the following expressions. (4 marks)

a) $(-4)^3 - (-2)^4 \div 2^2 + 5^2 \times 7^0$

b) $[(-2)^5 \div (-2)^4]^3 - [(-5)^2 \div (-5)^3]^0$

7. Solve for the given variable. (SHOW WORK) (8 marks)

Leave answers in reduced fraction or exact decimal form.

a) $3x + 7 = x - 14$

b) $\frac{m}{3} - 4 = -13$

c) $4(2n - 4) = 3(n + 3)$

d) $9 - 2k < 5$

8. Evaluate completely. Leave answers in reduced fraction form. No decimals! (2 marks)
(SHOW WORK)

$$3x^2 - y^3 \text{ where } x = \frac{1}{4} \text{ and } y = -\frac{1}{2}$$

PART C:

(3 marks)

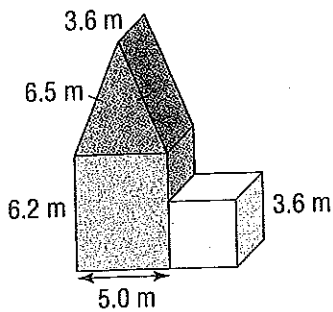
9. Determine the surface area of the following composite object made up of a triangular prism, rectangular prism, and a cube. **(SHOW WORK)**

AREA OF TRIANGLE → $A = \frac{bh}{2}$

note: will need to use Pythagorean's Theorem to calculate **height of triangle** ($a^2 = b^2 + c^2$)

AREA OF A RECTANGLE → $A = lw$

AREA OF A SQUARE → $A = s^2$



TOTAL MARKS : _____
 34