Revision Term 2

1. a) Simplify algebraic expression A: $-(3a^3)^2 + \sqrt[3]{-27a^9} + \sqrt{36a^2}$

b) Now find the quotient of the simplified expression A and $-3a^3$.

c) For what value of a will the last term in Question b) be undefined?

2. a) Simplify algebraic expression B: $\sqrt{49x^8} \times \sqrt[3]{x^6} - (-1)^3xy^2 - (2x^2y)^2$

b) Write down the number of terms in expression B.

c) Write down the coefficient of the last term in the expression.

d) Find the product of the simplified expression B and $-2xy$.

3. Consider the equation: $4(x + 1) - 6 = -(x + 27)$.

a) Show that $x = 5$ is NOT a solution to the equation.

Left-hand side:

Right-hand side:

b) Solve for x.

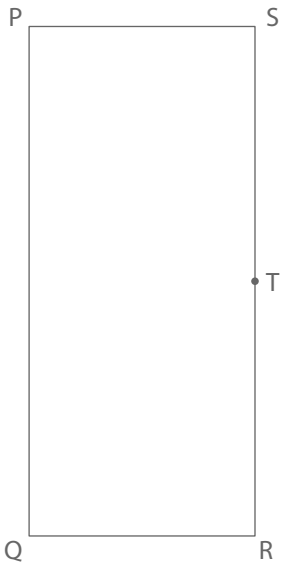
4. Calculate the value of the following expressions if $p = -5$ and $q = 3$.

a) $(p + q)^q$

b) $(2p)^2 - 3q^3$

c) $(q - p)^{-q - p}$

5. PQRS is a rectangle. T is the midpoint of RS.



Use a compass, pencil and ruler to complete the following.

a) Bisect QR to find point U.

b) Construct TV ⊥ SR. (Point V is inside the rectangle.)

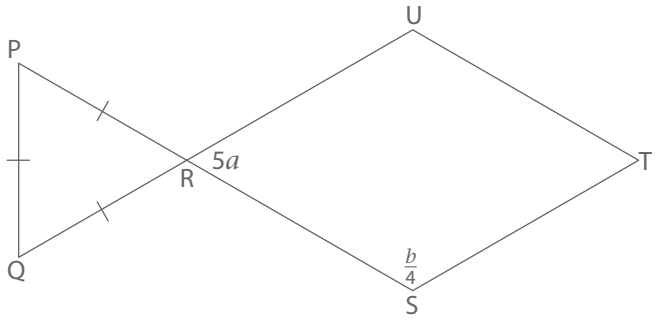
c) Produce construction lines to form rectangle TVUR.

d) Choose the correct word.

Rectangles PQRS and VURT are (congruent / similar).

e) Bisect ∠P.

6. Jabu made a diagram of a fish.



a) Choose the correct word.

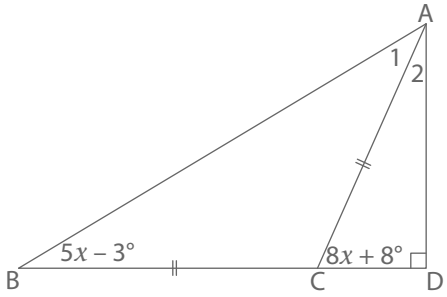
The body of the fish is a (square / rhombus).

b) Find (with reasons) the values of a and b.

7. **a)** Classify:

i) △ABC in terms of sides

ii) △ABD in terms of angles.



b) Find the value of x (with reasons).

c) Calculate the size of $\angle A_2$.