Review Sheet – 4

1. Without using calculators, calculate the following:

   a) $\log_2(16\sqrt[3]{2})$ b) $\log_3(9\sqrt[4]{3})$

2. Solve for *x*. Round your answer to the nearest tenth.

   a) $5^x = 12$ b) $7^{2x} = 15$

3. Find the vertex of the quadratic equation.

   $y = -x^2 + 6x - 4$.

   Graph the function, label the vertex. *x* and *y* intercepts with the coordinates on a graph paper.

4. a) Simplify the complex fraction: $\dfrac{\frac{3}{x^2}-\frac{7}{x}}{\frac{4}{x^2}-\frac{3}{x}}$

   b) Find the quotient of $\dfrac{3-4i}{2+i}$ and express it in the form $a + bi$.

5. Solve the equations:

   $-x + y + 2z = 2$

   $x + y + 3z = 17$

   $-3x - y + z = -7$

6. Solve for x, y:

   $4x + y = 2$

   $x^2 - 3y = -33$

7. $\sin\theta = -\frac{3}{5}$, $\cos\theta < 0$. State the values of the six trig values of θ.