Q.1. Find the Slope of the line segment connected by the two points:
(i) (a + b, -a - b) & (c + d, -c - d)
(ii) (-2a, 4b) & (4b, -2a)

Q.2. Write an equation of straight line in y = mx + c by using the following attributes:
(i) A line passes through the point (-7, -5) and parallel to the line (a) X = 7, (b) Y = 6
(ii) A line passes through the point (7, 2) and is perpendicular to line (a) X = 7, (b) Y = 6
(iii) Write an equation of straight line in y = mx + c which passes through (a, b) and (c, d).

Q.3. Determine the x-intercept and Y-intercept values of the following:
(i) dx + ey + g = hy + fx – c
(ii) (x – 2y)/3 -24 = (2x + 4y)/6 – 17

Q.4. Solve for the Absolute value of x: (i) $|x^2 - 2| > 2$ (ii) $|x^2 - 8| < 8$

Q.5. Write an equation of the line which passes through the point of intersection of 2x + 3y – 5 = 0 and 7x – 5y – 2 = 0 and is perpendicular to the line 2x – 3y + 14 = 0.

Q.6. What is the domain of the function?
(i) f(x) = $\sqrt{x^2 + x - 6}$
(ii) f(r) = $\frac{\sqrt{25+r^2}}{3^r}$
(iii) f(x) = $\sqrt{\frac{x}{x-8}}$

Q.8. For each of the following functions find the inverse of the function. Verify your inverse by computing one or both of the composition:
(i) h(x) = 7 + (2x + 1)^3
(ii) R(x) = (2x + 14) / (6x + 1)
(iii) W(x) = $\sqrt[3]{6 - 18x}$