MTH101: Practice Exercise   Lecture No.2: Absolute Value

Q.No.1

Solve for x, $\left|\dfrac{x+7}{4-x}\right| = 8$.

Answer: $x = \dfrac{25}{9}$ and $x = \dfrac{39}{7}$

Q.No.2

Is the equality $\sqrt{b^4} = b^2$ valid for all values of b? Justify your answer with appropriate reasoning.

Q.No.3

Find the solution for: $\left|x^2 - 25\right| = x - 5$.

Answer: $x = 5$

Q.No.4

Solve for x: $\left|6x - 8\right| - 10 = 8$.

Answer: $x = -\dfrac{5}{3}, \dfrac{13}{3}$

Q.No.5

Solve for x: $\left|x + 4\right| < 7$.

Answer: Solution set is $(-11, 3)$.