

Date: 18/06/25

Revision Worksheet

XII Applied Mathematics (241)

[A] Solve the following inequalities and represent their solutions on the number line:-

(i) $|7 - 3x| \leq 8$

(vi) $|x - 1| \leq 3, |x| \geq 1$

(ii) $|3x - 2| \geq \frac{1}{2}$

(iii) $\frac{x+3}{x-2} \leq 2, x \neq 2$

(iv) $3x + 7 \geq 5 - 2x \geq 13 - 6x$

(v) $\frac{4x}{3} - \frac{9}{4} < x + \frac{3}{4}, \frac{7x-1}{3} - \frac{7x-2}{6} > x$

[B] (i) Find the unit digit of 11^{132} .

(ii) It is 10:00 a.m. currently in the digital watch. What time will watch show (in a.m. or p.m.) after 400 hours?

(iii) Find the least non-negative remainder when 3^{100} is divided by 7.

(iv) Find the multiplication modulo 6 if a and b are 13 and 11 respectively.