# MTH 5
## Test 1 Review Problems Answers

1. No, it is not
2. No, it is not

3. (a) x = -3 (b) x = 8
   (c) all real numbers (infinitely many solutions)
   (d) no solutions
   (f) $x=-\frac{6}{7}$ (g) $x=\frac{5}{3}$
   (h) $x=-\frac{5}{9}$ (i) x = 21

4. (a) $y=\frac{5x-23}{9}$ (b) $b=\frac{1}{4}\left(\frac{t}{w}+z\right)$

5. (a) $x\le 9$ (b) x > 3

   set-builder notation: { x | $x\le 9$ } {x | x > 3}

   interval notation: (-∞ , 9] (3, ∞)

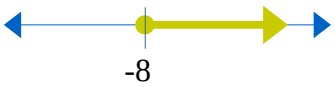
   graphically:

   (c) $x\ge -8$ (d) $x\ge -7$

   set-builder notation: { x | $x\ge -8$ } {x | $x\ge -7$ }

   interval notation: [-8, ∞) [-7, ∞)

   graphically:

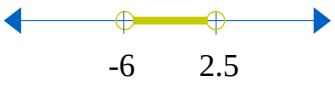


6. (a) $-6<x<\frac{5}{2}$ (b) 9 > x > 7 or 7 < x < 9

   set-builder notation: { x | $-6<x<\frac{5}{2}$ } {x | 7 < x < 9}

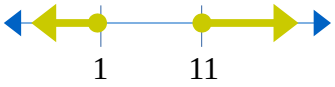
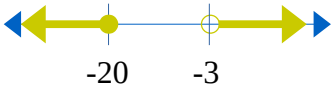
   interval notation: (-6 , 5/2) (7,9)

   graphically:



   (c) $x\le 1$ or $x\ge 11$ (d) $x>-3$ or $x\le -20$

   set-builder notation: { x | $x\le 1$ ∪ $x\ge 11$ } {x | $x>-3$ ∪ $x\le -20$ }

   interval notation: (-∞, 1] ∪ [11, ∞) ( -∞, -20] ∪ (–3, ∞)

   graphically: