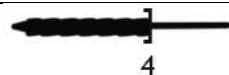
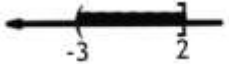


Math 9 Review test 3 – linear equations, quadratic equations, inequalities

1	$0.2x - 10 = 13.4$
2	$2 - 3(4 - x) = 2x$
3	$\frac{x+5}{3} = x + \frac{1}{6}$
4	$\frac{2x}{a} + b = \frac{x}{a}$
5	$a + bx = c$
6	$3x - 2 = 6x - 29$
7	$\frac{x}{5} - 1 = \frac{7}{15}$
8	$2 - x(5 - x) = x^2 + 6x$
9	$\frac{3x-5}{2} = \frac{x+7}{3}$
10	$\frac{x+1}{x} = \frac{2}{3}$
11	Complete the square: $x^2 - 6x$
12	Complete the square: $x^2 + 3x$
13	If $x^2 + 10x = 50$, then $(x + 5)^2 = \underline{\hspace{2cm}}$.
14	If $x^2 - 12x = 0$, then $(x - 6)^2 = \underline{\hspace{2cm}}$.
15	$4x^2 - 16x - 9 = 0$
16	$x(x + 1) = 30$
17	$9x^2 - 25 = 0$
18	$x(6x - 7) - 2 = 1$
19	$3x^2 - 13x - 10 = 0$
20	$x^2 = 9$
21	$(x - 6)^2 = 9$
22	$(x - 6)^2 = 2$
23	$(x + 3)^2 = -2$
24	Solve by completing the square: $x^2 + 8x = 5$
25	Solve by completing the square: $x^2 + 10x - 3 = 0$
26	Solve using the Q.F.: $6x^2 + 9x + 2 = 0$
27	Solve using the Q.F.: $x^2 - 6x - 2 = 0$
28	Solve using the Q.F.: $x^2 + 10x = -25$
28	Solve using the Q.F.: $x^2 - 2x + 4 = 0$
30	$F = \frac{9}{5}C + 32$, find F when $C = 25$.
31	$C = \frac{5}{9}(F - 32)$, find C when $F = 41$.
32	$S = \frac{N}{2}(A + L)$, find N when $A = 2, L = 20$ and $S = 110$.
33	$P = 2L + 2W$, find W when $P = 50$ and $L = 15$.
34	$9 \leq -\frac{1}{3}x$
35	$2x - 3 < 7$
36	$2 - (3 - 2x) > 5$
37	$-12 < -6x < 30$
38	$-7 < 4x + 1 < 14$
39	$-10 \leq -2x \leq 20$
40	$-5 < 1 - 2x < -3$

41		Convert the graph: _____ to interval notation.
42		Convert the graph: _____ to interval notation.
43	Convert (5,8) to inequality notation.	
44	Convert to inequality notation: $[2, \infty)$, $(-\infty, 1)$, $[2, 4)$.	

Solutions:

1	$x = 117$	2	$x = 10$
3	$x = \frac{9}{4}$	4	$x = -ab$
5	$x = \frac{c-a}{b}$	6	$x = 9$
7	$x = \frac{22}{3}$	8	$x = \frac{2}{11}$
9	$x = \frac{29}{7}$	10	$x = -3$
11	$x^2 - 6x + 9$	12	$x^2 + 3x + \frac{9}{4}$
13	$(x + 5)^2 = 75$	14	$(x - 6)^2 = 36$
15	$x = \frac{9}{2}, x = -\frac{1}{2}$	16	$x = -6, x = 5$
17	$x = \frac{5}{3}, x = -\frac{5}{3}$	18	$x = -\frac{1}{3}, x = \frac{3}{2}$
19	$x = \frac{-2}{3}, x = 5$	20	$x = \pm 3$
21	$x = 9, x = 3$	22	$x = 6 \pm \sqrt{2}$
23	No real solution	24	$x = -4 \pm \sqrt{21}$
25	$x = -5 \pm \sqrt{28}$	26	$x = \frac{-9 \pm \sqrt{33}}{12}$
27	$3 \pm \sqrt{11}$	28	$x = -5$
29	No real solution	30	$F = 77$
31	$C = 5$	32	$N = 10$
33	$W = 10$	34	$x \leq -27$
35	$x < 5$	36	$x > 3$
37	$-5 < x < 2$	38	$-2 < x < 13/4$
39	$-10 \leq x \leq 5$	40	$2 < x < 3$
41	$(-\infty, 4]$	42	$(-3, 2]$
43	$5 < x < 8$	44	$x \geq 2, x < 1, 2 \leq x < 4$