Answers

1) $\{-11\}$

2) $\{2,16\}$

3) $\{-3,2\}$

4) $x \le 8, (-\infty, 8]$ Closed at 8, shade left

5) $x > 6, (6, \infty)$ Open at 6, shade right

6) $-2 < x \le 9, (-2, 9]$

7) $2 \le x \le 10, [2, 10]$ Shade between 2 & 10

8) $x < -9$ or $x > 4, (-\infty, -9) \cup (4, \infty)$

Open at -9 & 4, shade outside

9) $\mathbb{R}$

10) $\varnothing$

11) $\varnothing$

12) Line through (0,8) & (3,6) – Down 3, Right 2

13) Line through (0,1) & (1,6) – Up 5, Right 1

14) v-point $(5, -4)$, open up, D: $(-\infty, \infty)$, R: $[-4, \infty)$

15) v-point $(-3, 1)$, open down, D: $(-\infty, \infty)$, R: $(-\infty, 1]$

16) $(x-10)(x+2)$

17) $(x+4)(x+6)$

18) $3(x+11)(x-2)$

19) $(x-8)(2x+3)$

20) $(2x+7)(2x-7)$

21) $(x-6)(x^2+6x+36)$

22) $(x+9)(x^2-9x+81)$

23) $\{-4,9\}$