# HWQ1

p 303

9. $x=0,\ x=6$

10. $x=0,\ x=-3,\ x=\pm1$

11. $x=2,\ x=-4$

12. $x=-5,\ x=8$

13. $x=-6,\ x=\pm i$

15. $\frac{\pm2,\pm1}{\pm1} = 2,1,-2,-1$

16. $\pm1,\pm4,\pm16,\pm2,\pm8$

17. $\frac{\pm1,\pm45,\pm3,\pm15,\pm9,\pm5}{\pm2,\pm1}$

$= \pm1/2,\ \pm45/2,\ \pm3/2,\ \pm15/2,\ \pm9/2,\ \pm5/2$
$\pm1,\pm45,\pm3,\pm15,\pm9,\pm5$

19. $\pm1,\pm2,\pm3,\pm6$

| | | | | |
|---|---|---|---|---|
| 2 | 1 | −6 | 11 | −6 |
| | ↓ | 2 | −8 | 6 |
| | 1 | −4 | 3 | 0 |

$(x-2)(x^2-4x+3)$

$(x-2)(x-3)(x-1)$

$x=2,\ x=3,\ x=1$

20. $\pm1,\pm2,\pm3,\pm6$

| | | | | |
|---|---|---|---|---|
| −2 | 1 | 0 | −7 | −6 |
| | ↓ | −2 | 4 | 6 |
| | 1 | −2 | −3 | 0 |

$(x+2)(x^2+2x-3)$

$(x+2)(x+3)(x-1)$

$x=-2,-3,1$

25. $\frac{\pm1}{\pm1,\pm2} = \pm1,\pm1/2$

| | | | | |
|---|---|---|---|---|
| 1/2 | 2 | 3 | 0 | −1 |
| | ↓ | 1 | 2 | 1 |
| | 2 | 4 | 2 | 0 |

$2x^2+4x+2$

$2(x^2+2x+1)$

$2(x+1)(x+1)$

$x=1/2,-1$

→

26. $\frac{\pm 1 \quad \pm 3 \quad \pm 9}{\pm 1 \quad \pm 3}$

$= \pm 1, \pm 3, \pm 9, \pm 1/3,$

| | | | | |
|---|---|---|---|---|
| 3 | 3 | -19 | 33 | -9 |
| | ↓ | 9 | -30 | 9 |
| | 3 | -10 | 3 | 0 |

$3x^2 - 10x + 3$ $\quad ac = 9$, $b = -10$ $\}$ $-9, -1$

$3x^2 - 9x - x + 3$

$3x(x-3) - 1(x-3)$

$(3x-1)(x-3)$

$\boxed{x = 1/3, 3}$