1. $(x+1)^{3}$(4x-3)
2. $\left(x+1\right)\left(x+3\right)x\left(3x-4\right)$
3. (5x+2)x(x+1)
4. $\left(x+2\right)^{2}\left(x-1\right)\left(5x+2\right)\left(3x+2\right)$
5. {0,2/3, -5}
6. {0, -1/5, 3}
7. Roots: {-6 multiplicity 2, -3, 4,7} Factors: $\left(x+6\right)^{2}(x+3)(x-4)(x-7)$
8. Roots: {-3, 0 multiplicity 2, 4, 6 multiplicity 2} Factors: $\left(x+3\right)x^{2}(x-4)(x-6)^{2}$
9. Roots: {-7,-3, 3 multiplicity 2, 5} Factors: (x+7)(x+3)$\left(x-3\right)^{2}(x-5)$
10. Roots: {-5, -2, 1, 4 multiplicity, 6} Factors: (x+5)(x+2)(x-1)$\left(x-4\right)^{2}\left(x-6\right)$

Back page:

1. Domain: [-3,∞)

Range: (-∞, 4]

Increasing: (-3,-1)

Decreasing: (-1, ∞)

Constant: never

Function? Yes

1. Domain: [-4, -2], (-1, ∞)

Range:-4, 1, (3, ∞)

Increasing: (3, ∞)

Decreasing:

Constant: (-4,-2), (-1, 3)

Function? yes

1. Domain: all real numbers

Range: [-4, ∞)

Increasing: (-2,-1), (3, ∞)

Decreasing: (-∞,2), (-1,3)

Constant:

Function? Yes

1. Domain: all real numbers

Range: [-3,1], 3

Increasing:

Decreasing: (-2, 3)

Constant: (-∞,-2), (3, ∞)

Function? No

1. Domain: all real numbers

Range: all real numbers

Increasing: (2, ∞)

Decreasing: (-∞, -3)

Constant: (-3, 2)

Function? Yes

1. Domain: (-∞, -1] ,(2, ∞)

Range: (-∞,-2], (2, ∞)

Increasing: (-∞,-3), (2, ∞)

Decreasing: (-3,-1)

Constant:

Function? Yes

1. Domain: all real numbers

Range: [-4, ∞)

Increasing: (-2,-1), (2,4)

Decreasing: (-∞,-2), (-1,2)

Constant: (4, ∞)

Function? No

1. Domain: all real numbers

Range: [-3, ∞)

Increasing: (0, ∞)

Decreasing: (-∞,0)

Constant:

Function? yes