Name: _____

Domain and Range of Functions

Exercise 1: Determine the domain and range.

1) $f(x) = -x^2 + 3x - 9$

2) $f(x) = x^4 - 7x + 2$

3) $f(x) = 5x^2 - 11x + 21$

4) $f(x) = x^2 - x + 2$

5) $f(x) = \dfrac{2x+1}{x+7}$

6) $f(x) = \dfrac{7}{x} + \dfrac{5}{2x-3}$

7) $f(x) = \dfrac{x+1}{x^2-9}$

8) $f(x) = \dfrac{3x}{x^2-49}$

9) $f(x) = \dfrac{5x+20}{x^2+9x+20}$

10) $f(x) = \dfrac{6x+10}{5x^2+13x+23}$

11) $f(x) = \sqrt{x+2}$

12) $f(x) = \sqrt{4x^2-9}$

13) $f(x) = \sqrt{x^2+21}$

14) $f(x) = \sqrt{4x^2+132}$

15) $f(x) = \sqrt{x-17}$

16) $f(x) = \sqrt{6x+15}$

17) $f(x) = \dfrac{2x+3}{\sqrt{x+16}}$

18) $f(x) = \dfrac{x-7}{\sqrt{2x-8}}$

19) $f(x) = \dfrac{x+7}{\sqrt{1-x}}$

20) $f(x) = \dfrac{2x-9}{\sqrt{4+3x}}$

21) $f(x) = \dfrac{\sqrt{-x^2+121}}{132}$

22) $f(x) = \dfrac{\sqrt{x-1}}{\sqrt{x+1}}$

Grade 11