1. $f(x) = 1 + x^2$

- **Domain**: x^2 is defined for all real numbers x. So, the domain is:

$$\text{Domain: } (-\infty, \infty)$$

- **Range**: Since $x^2 \geq 0$, the smallest value of $1 + x^2$ is 1 (when $x = 0$). Hence, the range is:

$$\text{Range: } [1, \infty)$$

---

2. $f(x) = 1 - 2x$

- **Domain**: This is a linear function, which is defined for all real numbers. So:

$$\text{Domain: } (-\infty, \infty)$$

- **Range**: A linear function covers all real numbers:

$$\text{Range: } (-\infty, \infty)$$

---

3. $F(x) = \sqrt{25x + 10}$

- **Domain**: The square root function is defined when its argument is non-negative:

$$25x + 10 \geq 0 \quad \Rightarrow \quad x \geq -\frac{2}{5}$$

$$\text{Domain: } [-\frac{2}{5}, \infty)$$

- **Range**: The smallest value of the square root is 0 (when $x = -\frac{2}{5}$), and it increases without bound:

$$\text{Range: } [0, \infty)$$

---

4. $g(x) = 2x^2 - 3x$

- **Domain**: This is a polynomial, which is defined for all real numbers:

$$\text{Domain: } (-\infty, \infty)$$

- **Range**: This is a quadratic function opening upwards ($2x^2$ term dominates). To find the range, locate the vertex:
  - Vertex occurs at $x = -\frac{b}{2a} = -\frac{-3}{2(2)} = \frac{3}{4}$.
  - At $x = \frac{3}{4}$, compute $g\left(\frac{3}{4}\right) = 2\left(\frac{3}{4}\right)^2 - 3\left(\frac{3}{4}\right) = -\frac{9}{8}$. So the minimum value of $g(x)$ is $-\frac{9}{8}$, and the range is:

$$\text{Range: } [-\frac{9}{8}, \infty)$$

---

5. $f(t) = \frac{4}{3-t}$

- **Domain**: The denominator $3 - t$ cannot be zero:

$$3 - t \neq 0 \quad \Rightarrow \quad t \neq 3$$

$$\text{Domain: } (-\infty, 3) \cup (3, \infty)$$

- **Range**: Since this is a rational function with a single vertical asymptote at $t = 3$, all real values except 0 are possible:

$$\text{Range: } (-\infty, 0) \cup (0, \infty)$$

---

6. $G(t) = \frac{2}{t^2-16}$

- **Domain**: The denominator $t^2 - 16$ cannot be zero:

$$t^2 - 16 \neq 0 \quad \Rightarrow \quad t \neq \pm 4$$

$$\text{Domain: } (-\infty, -4) \cup (-4, 4) \cup (4, \infty)$$

- **Range**: This is a rational function, so the output can take all real values except 0 (as the numerator is 2, which is never 0). The vertical asymptotes are at $t = \pm 4$, and the horizontal asymptote is $y = 0$. Thus:

$$\text{Range: } (-\infty, 0) \cup (0, \infty)$$