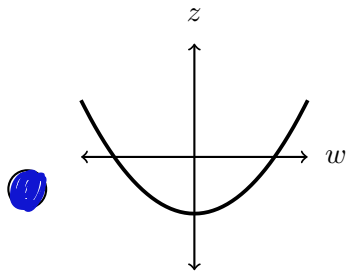


2. [11 points]

- a. [5 points] Each of the following describes a relationship between variables w and z . Fill in the bubble completely for each case where (from the information given) z could be a function of w .



$z - 5w = 3w + 2$

z is the number of people in the M-36 Cafe at w minutes past opening on January 1, 2023.

z is the number of minutes past opening on January 1, 2023 when there are w people in the M-36 cafe.

w	0	2	2
z	3	6	1

b. [6 points] Below are several different situations where the variable y can be considered a linear function of x . For each function described, what is the slope of its graph?

i. $y = 2x + 2(x - 1) + 6$ SLOPE = 4

ii. $y = 5$ SLOPE = 0

iii. The line going through the points $(-1, -5)$ and $(2, 4)$ SLOPE = 3



v. A line $y = f(x)$ perpendicular to the graph of the line $g(x) = \frac{1}{3}x - 5$ SLOPE = -3

vi. The slope of the line which is the *shift* of the graph of $y = 0.4x - 1$ up by 2 units and left by 5 units. SLOPE = 0.4