

MATH301 HW 1

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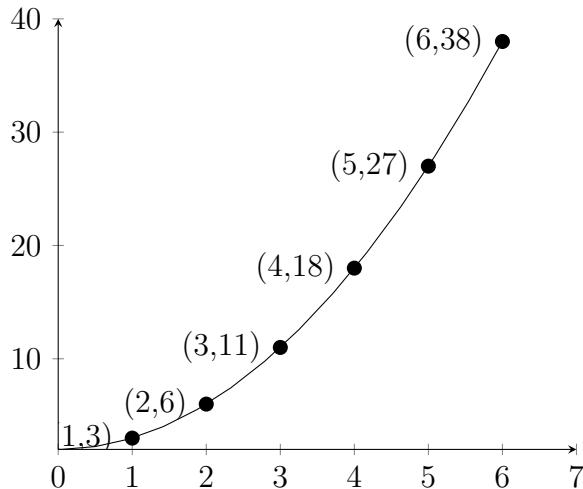
1 Section 1.1: problems A6,B22,B24,C34

A6:

$$\begin{aligned} \text{Let } A &= \{x \in \mathbb{R} | x^2 = 9\} \\ \sqrt{9} &= -3, 3 \therefore \\ A &= \{-3, 3\} \text{ as } \nexists x \in \mathbb{R} | x^2 = 9, x \notin 3, -3 \end{aligned}$$

B22:

$$\begin{aligned} A &= \{3, 6, 11, 18, 27, 38, \dots\} = \\ A &= \{n^2 + 2 : n \in \mathbb{Z}\} \end{aligned}$$



B24:

$$\begin{aligned} A &= \{-4, -3, -2, -1, 0, 1, 2\} = \\ A &= \{x \in \mathbb{Z} | -4 \leq x \leq 2\} \end{aligned}$$

C34:

$$\begin{aligned} \text{Let } A &= |\{x \in \mathbb{N} \mid |x| < 10\}| \\ A &= \{1, 2, 3, 4, 5, 6, 7, 8, 9\} \\ |A| &= 9 \end{aligned}$$