

Exercise 1.2.4

Introduction to Discrete Mathematics MATH 2001

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ABSTRACT. This is Exercise 1.2.4 from Hammack [Ham13, §1.2]:

Exercise 1.2.4. Write out the indicated set by listing its elements between braces:

$$\{n \in \mathbb{Z} : 2 < n < 5\} \times \{n \in \mathbb{Z} : |n| = 5\}$$

Solution. Since $\{n \in \mathbb{Z} : 2 < n < 5\} = \{3, 4\}$ and $\{n \in \mathbb{Z} : |n| = 5\} = \{-5, 5\}$, we have

$$\begin{aligned} \{n \in \mathbb{Z} : 2 < n < 5\} \times \{n \in \mathbb{Z} : |n| = 5\} &= \{3, 4\} \times \{-5, 5\} \\ &= \{(3, -5), (3, 5), (4, -5), (4, 5)\}. \end{aligned}$$

□

REFERENCES

[Ham13] Richard Hammack, *Book of proof*, Creative Commons, 2013.

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