

Math 2311

Written Homework 2 (Sections 2.1-2.4)

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Instructions

- Homework submitted via Canvas through email is not possible. Homework must be submitted through Canvas before midnight the deadline.
- Print out this document or software and complete the problems.
- Write calculations or data given or type your solution in the space provided. You must show all work for full credit.
- Submit this assignment at <https://www.canvas.lsu.edu> under "Assignments" and choose Homework 2.
- Total possible points: 40

1. Section 2.1, Problem 4

How many integers from 100 to 1000 have at least two factors less than or equal to 10? (Note: 1000 is not included.)

It is known that $1000 = 2^3 \cdot 5^3$.

A: 11

B: 12

C: 13
D: 14

2. Section 2.1, Problem 14

114 numbers are chosen at random with one factor less than or equal to 10 and 114 are chosen. In how many ways can we show that a number is not a prime and it will be false?

A: choose(114, 1)

B: 114

C: choose(11, 2)

D: 44

E: choose(11, 2)

F: 44

G: $(11^2 \cdot 11) / 1000$

H: $4 \cdot 1000000$

I: $1000^2 \cdot 4 \cdot 100000$

J: 400

K: $25^2 \cdot 20$

L: 400