

CSc 245 Discrete Structures - Summer 2020

Homework #8

Due: Friday August 7th, 2020 by 5 p.m (MST).

Instructions:

1. Homework assignments are to be completed individually, **not** in groups.
2. If you need help, take advantage of Piazza and office hours.
3. Assignments are to be submitted in PDF form. They may be typed (which is preferable and strongly recommended) or handwritten with each page scanned or photographed and compiled into a single PDF.
4. If you choose to handwritten your assignments, please write neatly. Illegible assignments may not be graded.
5. Extra credit will be given for typed homework. To make this easier, a **Latex** template will be provided for each assignment.
6. Show your work (when appropriate) for partial credit!

Section	Exercises	Points
6.1	12	2
	26	6
	28	2
	36	2
	40	2
	50	2
6.2	8*	6
	18	2
6.3	14	2
	16	2
	20	8
	24	2
	26 a	2
6.5	36	2
	10c	2
	32	2
Below	1	4
	Total	50
	Typed	+2.5

* For this question. "show" \equiv "prove"! Write a complete proof.

1. A discrete math class has 100 students. Of those 100 students, 43 have dogs, 27 have cats, and 12 have turtles. 10 students have both a dog and a cat, 8 have both a cat and a turtle and 3 have both a dog and a turtle. None have all three.
 - (a) How many students have a pet?
 - (b) How many students have only a dog?