Take-home Exam

(!) This is a preview of the published version of the quiz

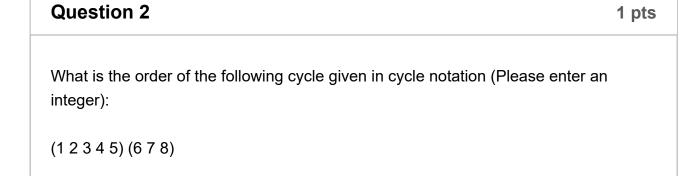
Started: Apr 14 at 8:16pm

Quiz Instructions

This is the take-home exam. The exam is due on December 4, 11:59 pm PST. Until then, you are free to use as much time as you wish when working on the exam.

Furthermore, the exam is open-book and open-internet. You may use materials online and in the readings, but you may not consult other students about the exam.

Question 1	1 pts
A group is a set of objects with a binary operator which has satisfy various conduction G is a set of elements with a binary operation G . Select each condition which is required for G , G 0 to be an group:	
For any elements f, g, and h in G, (f * g) * h = f * (g * h).	
☐ There exist an identity element e in G such that for all g in G, g * e = e * g = g.	
\Box For all elements g in G, there exists an element g ⁻¹ in G such that g * g ⁻¹ = g ⁻¹ * g = e.	
☐ For any elements f, g in G, f * g = g * f.	
For any elements f, g in G, the element f * g is also in G.	



Question 3	1 pts
True or False: The following cycle has an even parity:	
(1 2 3 4)	
○ True	
○ False	
Question 4	1 pts
True or False: The cube always has an even parity (the r	
Question 4 True or False: The cube always has an even parity (the refrom the starting position is always even).	
True or False: The cube always has an even parity (the r	
True or False: The cube always has an even parity (the reference from the starting position is always even).	

Question 6	1 pts
Which of the following choices is the inverse of the following moves:	
RULR'	
○ R' U' L' R	
○ RULR	
○ R L' U' R'	
○ R' L' U' R'	
Question 7	1 pts

Question 7	1 pts
True or False: The following two group elements are the same: 1. U D U 2. U2 D	
○ True	
○ False	

Question 8	1 pts
Which of these choices is a valid cycle decomposition of the following permu $ \binom{1\ 2\ 3\ 4\ 5}{3\ 2\ 1\ 5\ 4} $	tation?
○ (1 3) (4 5)	
O (1 2 3) (4 5)	

Question 9	1 pts
What is the corner/edge parity of the cube after applying the solved cube?	e following move to the
२	
○ Corners are even, edges are even.	
○ Corners are odd, edges are odd.	
○ Corners are even, edges are odd.	
○ Corners are odd, edges are even.	
Question 10	1 pts
Γhanks for taking our class! Please fill out the following feed	dback form:
nttps://forms.gle/khNikXLJnhdY63CH6 (https://forms.g	<u>le/khNikXLJnhdY63CH6)</u>

No new data to save. Last checked at 8:17pm

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