

Math 61 Quiz Week 1 10 minutes.

5/5

Your Name and UCLA ID:	SECTION:
------------------------	----------

**Problem 1.** Write your name, ID, and section above!

**Problem 2.** Circle the correct answer. The sum of the elements  $1 + 2 + \dots + 30$  equals

- (a)  $30^2/2$ ,
- (b)  $(29 \cdot 30)/2$ ,
- (c)  $(30 \cdot 31)$ ,
- (d)  $15 \cdot 31$ .
- (e)  $(29 \cdot 30)$

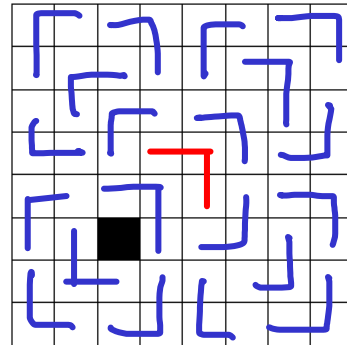
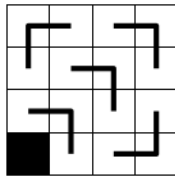
✓

**Problem 3.** Fill in, no explanation will be taken into account. If we want to show  $2^n + n \leq n!$  for all  $n \geq a$  for some  $a$  then  $a =$  4, if we prove it by induction the base case is  $n =$  4.

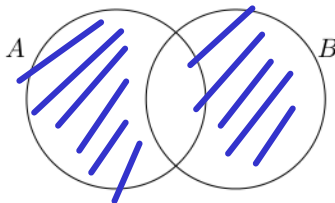
✓

**Problem 4.** Below on the left is a defective  $4 \times 4$  board tiled with trominos. Tile the defective  $8 \times 8$  board on the right with trominos.

✓



**Problem 5.** Below is a Venn diagram representing sets  $A$  and  $B$ , shade the set  $(A - B) \cup (B - A)$ .



✓