## 2018 CMPUT 396

## quiz 4 solution hints

1. r(10) = c \* 10 \* 10 = 15 so c = 15/100 = .15 so r(50) = c \* 50 \* 50 = (15/100) \* 2500 = 15 \* 25 = 375Or solve it this way: r(50)/r(10) = (c \* 50 \* 50)/(c \* 10 \* 10) = 25 so r(50) = 25 \* r(10) = 25 \* 15 = 375 $n \le 1/n$  (3+1) = 4 4  $\le$ 

2. position

player-to-move

any earlier position



3. John Nash (or Piet Hein)

adding stones, no draws

Claude Shannon

all four

4. the second diagram in http://webdocs.cs.ualberta.ca/~hayward/396/hexnotesp1.pdf has a winning White virtual connection "spider diagram"

below, in each diagram: marked stones are captured, small dots show Black mustplay



(intersection of these two mustplays leaves mustplay size one: do you see Black's forced move?)