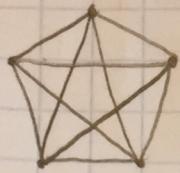


## Quiz 5

CprE 3W

Jacob Boicken

1.)



$$|E| = 10$$

for  $K_5$



$$|E| = 11$$

for  $K_{3,5}$

$$2) \quad 2|E| / 7 = 12$$

12 vertices

$$3.) a) P(2) = 1 \cdot 2 = \frac{2(2-1)(2+1)}{3} = \frac{2 \cdot 1 \cdot 3}{3} = 2$$

$$P(2)$$

$$\forall k \geq 2, \frac{P(k) \rightarrow P(k+1)}{\therefore \forall n, P(n)}$$

$$b) \quad P(k) = \frac{k(k-1)(k+1)}{3}$$

(c)

$$P(k+1) = \frac{(k+1)(k+1-1)(k+1+1)}{3}$$

$$= \frac{(k+1) \cdot k \cdot (k+2)}{3}$$