Funk (m)

Input : Integer m

Output: $3^m - 2^m$

1 **if** $m \leq 1$ **then**

2 | return m;

3 **end**

4 return $5 \times \texttt{Funk}(m - 1) - 6 \times \texttt{Funk}(m - 2)$;

Prove Funk(n) outputs $3^n - 2^n$ for all $n \geq$ ___

- Base case(s):_____

- Let $k \geq$ ___. Assume for strong induction that $P(j)$ is true for all j such that ___$\leq j \leq k$.

Draw this graph:

- $V = \{a, b, c, d, e\}$
- $E = \{\{a, b\}, \{a, c\}, \{a, d\}, \{b, c\}, \{d, e\}, b, e\}, \{c, e\}\}$

If

- a = racoon
- b = hawk
- c = owl
- d = squirrel
- e = crow

What does the graph represent?

Graph Applications

- Brainstorm other natural questions we might want to ask about graphs, and give a real world example where that is a useful question.