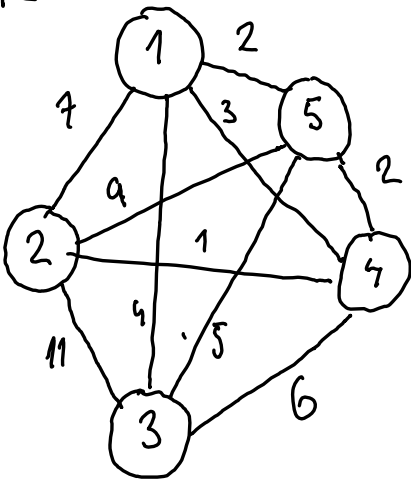


# TSP CHEAPEST INSERTION EXAMPLE



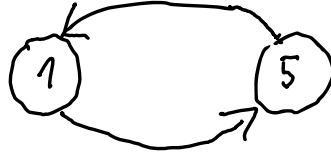
STARTING NODE: ①

$$k=2: 7+7-0=14$$

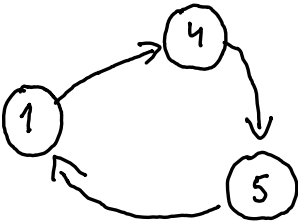
$$3: 4+4-0=8$$

$$4: 3+3-0=6$$

$$5: 2+2-0=\boxed{4}$$



Price: 4



Price: 7

$$k=2$$

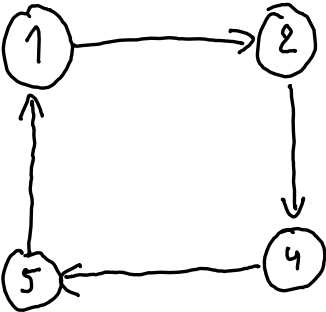
$$1 \rightarrow 5: 7+9-2=14$$

$$k=3$$

$$1 \rightarrow 5: 4+5-2=7$$

$$k=4$$

$$1 \rightarrow 5: 3+2-2=\boxed{3}$$



Price: 12

$$k: 2$$

$$1 \rightarrow 4: 7+1-3=\boxed{5}$$

$$4 \rightarrow 5: 1+9-2=8$$

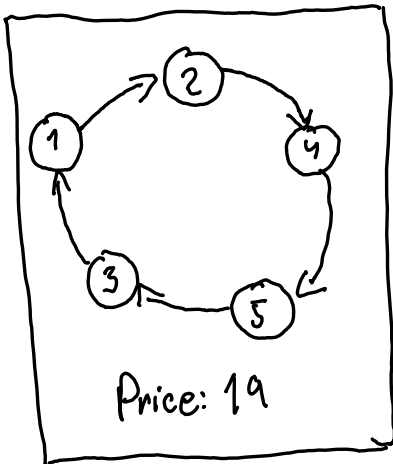
$$5 \rightarrow 1: 7+9-2=14$$

$$k: 3$$

$$1 \rightarrow 4: 7+6-3=7$$

$$4 \rightarrow 5: 6+5-2=9$$

$$5 \rightarrow 1: 4+5-2=7$$



Price: 19

$$k: 3$$

$$1 \rightarrow 2: 4+11-7=8$$

$$2 \rightarrow 4: 11+6-1=16$$

$$4 \rightarrow 5: 6+5-2=9$$

$$5 \rightarrow 1: 4+5-2=\boxed{7}$$