d. P(Sea=blue | Time=day, Sky=clear)

Choose a minimal set of parents:

Sea is independent of Moon.

Sea has a parent Sun.

Sun has parents Time, and Sky

Calculate the distribution of P(Sea=blue):

and:

=>

P(se|t,sk1)= α (0.5)(0.5) \* ((0.9 \* 0.8) + (0.1 \* 0.3)) = α0.185

.25 \* .72 + .03

0.25 \* 0.75 = 0.1875

P(¬se|t,sk1)= α (0.5)(0.5) \* ((0.9 \* 0.2) + (0.1 \* 0.7)) = α0.0625

.25 \* .18 + .07

0.25 \* 0.25 = 0.0625

=> **P**(se|t,sk1) = α<0.1875,0.0625> => <0.75,0.25>

P(se|t,sk1) = 0.75