A couple decides they will continue to have children until they have two males. Assuming that P(male) = 0.5, what is the probability that their second male is their fourth child?

In [19]:

```
import scipy.stats as stats

# is the number of successes (in this case, the second male child).
k = 2
# is the number of failures before success (in this case, 2).
n = 2
#Probability of success(having a male child)
p = 0.5
#Probability
probability = stats.nbinom.pmf(k, n, p)
#Print
print(f"The probability that their second male is their fourth child is {probability:.4f}
")
```

```
The probability that their second male is their fourth child is 0.1875
```

In [1]:

```
from scipy.stats import nbinom
# is the number of successes (in this case, the second male child).
k = 2
# is the number of failures before success (in this case, 2).
n = 2
#Probability of success(having a male child)
p = 0.5
#Probability
probability = round(nbinom.pmf(k, n, p), 4)
print(f"The probability that their second male is their fourth child is {probability:.4f}
")
```

```
The probability that their second male is their fourth child is 0.1875
```

In [ ]:

```

```