Assignment 1

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1) A jar contains 24 marbles, some are green and others are blue. If a marble is drawn at random from the jar, the probability that it is green is $\frac{2}{3}$ Find the number of blue balls in the jar.
   Solution: Let there be n blue balls in the jar. Then, out of 24 marbles the jar has $24-n$ green balls. Given that

$$\text{Pr}\,(\text{Marble drawn is green}) = \frac{2}{3} \quad (0.0.1)$$

$$\frac{24 - n}{24} = \frac{2}{3} \quad (0.0.2)$$

$$\frac{n}{24} = \frac{1}{3} \quad (0.0.3)$$

$$n = 8 \quad (0.0.4)$$