Mean and Standard Deviation of a Binomial Distribution

For each situation, compute the **mean** and **standard deviation** using formulas: -
Mean: $\mu = np$
- Standard Deviation: $\sigma = \sqrt{np(1-p)}$

1. A coin is flipped 50 times, with p=0.5 for heads. Find the mean and standard

deviation of the number of heads.

2. A basketball player makes 80% of free throws. She shoots 25 times. Find the mean and standard
deviation of successful shots.

3. A factory produces items with a 0.1 probability of being defective. A sample of 200 items is chosen.
Find the mean and standard deviation of the number of defectives.

4. In a card game, the chance of drawing a heart from a standard deck is 0.25 . If 40 cards are drawn
(with replacement), find the mean and standard deviation of the number of hearts.

5. A cell phone company finds that 60% of its customers pay their bill on time. In a random sample of
100 customers, find the mean and standard deviation of those who pay on time.