

5 Probability & Statistics 1 – Part 1

—Answers

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5.1 mean = $\frac{30}{5} = 6$; median = 5 (middle value); mode = 5 (most common).

5.2 range = $20 - 4 = 16$.

5.3 $\bar{x} = \frac{40}{8} = 5$; $\sigma = \sqrt{\frac{218}{8} - 5^2} = \sqrt{27.25 - 25} = \sqrt{2.25} = 1.5$.

5.4 (a) yes, order matters; (b) no, order does not matter.

5.5 ${}^5C_2 = \frac{120}{2 \times 6} = 10$.

5.6 Order does not matter, so use a combination: ${}^7C_3 = \frac{7!}{3!4!} = \frac{7 \times 6 \times 5}{3 \times 2 \times 1} = 35$ committees.