



Name: \_\_\_\_\_



I roll a fair, 6 sided dice. Find the probability that I:

- |             |               |                               |               |                              |               |
|-------------|---------------|-------------------------------|---------------|------------------------------|---------------|
| a) roll a 4 | $\frac{1}{6}$ | c) roll an even number        | $\frac{3}{6}$ | e) roll a number more than 3 | $\frac{3}{6}$ |
| b) roll a 6 | $\frac{1}{6}$ | d) <b>don't</b> roll a 5 or 6 | $\frac{4}{6}$ | f) roll a number under 3     | $\frac{2}{6}$ |

I pick a random letter from the alphabet. Find the probability that I:

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|-----------------|----------------|--|-----------------|
| g) Pick a W     | $\frac{1}{26}$ | j) Pick a consonant                      | $\frac{21}{26}$ |
| h) Pick a B     | $\frac{1}{26}$ | k) Pick a letter after S in the alphabet | $\frac{7}{26}$  |
| i) Pick a vowel | $\frac{5}{26}$ | l) Pick a letter from the word SCHOOL    | $\frac{5}{26}$  |

I pick a random number from the numbers 1 to 20. Find the probability that I:

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|---|-----------------|--------------------------------------|-----------------|
| m) Pick a multiple of 4                                   | $\frac{5}{20}$  | q) choose a square number            | $\frac{4}{20}$  |
| n) Pick a number which is greater than 14                 | $\frac{6}{20}$  | r) Pick a non-triangular number      | $\frac{15}{20}$ |
| o) Pick a number which is <b>not</b> a multiple of 4 or 6 | $\frac{13}{20}$ | s) Pick a factor of 15               | $\frac{4}{20}$  |
| p) Pick a prime number                                    | $\frac{8}{20}$  | t) a multiple of 5 or a factor of 12 | $\frac{10}{20}$ |

A coin is flipped 100 times, it lands on heads 40 times.

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|---|------------------|
| a) What is the relative frequency of flipping a head?   | $\frac{40}{100}$ |
| b) It is flipped another 100 times, and it lands on 30 more heads. What is the new relative frequency?            | $\frac{70}{200}$ |
| c) After a further 50 flips, it lands on <b>tails</b> 30 times. What is new relative frequency of getting a head? | $\frac{90}{250}$ |

A biased dice is rolled 50 times, it lands on six 15 times.

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|--|------------------|
| d) What is the relative frequency of getting a six?  | $\frac{15}{50}$  |
| e) It's rolled another 100 times, and it lands on six 25 more times. What is the new relative frequency? | $\frac{40}{150}$ |
| f) After another 150 rolls, it lands on six 35 times. What is new relative frequency of getting a six?   | $\frac{75}{300}$ |

**Exam question:**

A spinner has a green sector, blue sector and red sector. The spinner is spun 300 times and it landed on red 124 times and on green 80 times.

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|---|-------------------|
| a) What is the relative frequency of the spinner landing on blue?   | $\frac{96}{300}$  |
| b) From the next 100 spins, two fifths landed on green. What is the new relative frequency of the spinner landing on green? | $\frac{120}{400}$ |

