

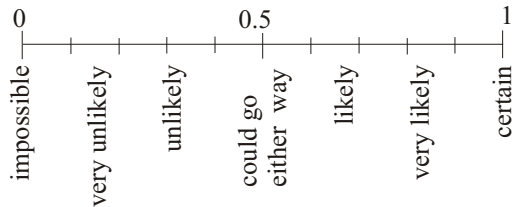
Master Maths 9 Worksheet 60

Probability 1

60

Name: _____

1. Rate the probability of the following events, occurring, from 0 to 1, according to this scale.



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|---|---|
| (a) It will rain on the first day in December of this year. | <input style="width: 60px; height: 25px;" type="text"/> |
| (b) You will be hit by lightning tomorrow. | <input style="width: 60px; height: 25px;" type="text"/> |
| (c) Your family car will start tomorrow morning. | <input style="width: 60px; height: 25px;" type="text"/> |
| (d) You will pass your next maths test. | <input style="width: 60px; height: 25px;" type="text"/> |
| (e) You will pick the winner of the next Melbourne Cup. | <input style="width: 60px; height: 25px;" type="text"/> |
| (f) Next year you will walk on the moon. | <input style="width: 60px; height: 25px;" type="text"/> |

Write all probabilities as fractions in Question 2

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| 2. (a) There are 9 puppies in a litter and 4 are females. What is the probability of randomly choosing a female? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{4}{9}$</div> |
| (b) What is the probability of randomly choosing a male puppy from this litter? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{5}{9}$</div> |
| (c) In a bag of chocolates there are 5 peppermint, 3 caramel, 4 strawberry and 2 nougat. What is the probability of randomly choosing a caramel? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{3}{14}$</div> |
| (d) After one caramel has been taken from this bag of chocolates, what is the probability of choosing another caramel? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{2}{13}$</div> |
| (e) What is the probability that your birthday next year will fall on a Saturday? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{1}{7}$</div> |
| (f) What is the probability that your best friend will have the same birthday as you? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{1}{365}$</div> |

(Non-leap year)

3. There are 13 hearts, 13 diamonds, 13 clubs and 13 spades in a deck of cards.

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| (a) What is the probability of randomly drawing a heart from a deck of cards? Write answer as a fraction in its simplest form. | <div style="border: 1px solid black; padding: 2px; display: inline-block;">$\frac{1}{4}$</div> |
| (b) If a person is dealt a hand of 12 cards, how many hearts would be expected in the hand? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">3</div> |

4. Bennie is the full forward for his football team. Before the season started he had 400 shots at goal and kicked 280 goals.

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| (a) Based on these figures, what is the probability (as a decimal) that Bennie will, when he shoots for goal, kick a goal? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">0.7</div> |
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| (b) If Bennie has 10 shots at goal in a game, based on this probability, how many goals would expect to kick? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">7</div> |
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| (c) If Bennie has 180 shots at goal during the season, how many goals would he expect to kick? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">126</div> |
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5. Tim is tree planter. On one property he planted 500 trees and found one year later that 400 had survived.

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| (a) Based on these figures, what is the probability (as a decimal) of a tree surviving? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">0.8</div> |
| (b) On another property he plants 3400 trees. How many would be expected to survive? | <div style="border: 1px solid black; padding: 2px; display: inline-block;">2720</div> |