Year 6 Homework Answers

Module 9: Probability

1.

a) [Head; Tail]

b) [0; 1; 2; 3; 4; 5; 6; 7]

c) [1; 2; 3; 4; 5]

2.

a) 3 different outcomes

b) $\frac{4}{20} = \frac{1}{5}$

c) $\frac{9}{20}$

3.

a) [1; 2; 3; 4; 5; 6; 7; 8; 9; 10]

b) $\frac{1}{10}$

c) $\frac{5}{10} = \frac{1}{2}$

d) $\frac{5}{10} = \frac{1}{2}$

4.

a) [1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12]

b) $\frac{6}{12} = \frac{1}{2}$

c) $\frac{6}{12} = \frac{1}{2}$

d) $\frac{5}{12}$

5.

a) [Y; E; L; O; W; D; R]

b) $\frac{5}{14}$

c) $\frac{6}{14} = \frac{3}{7}$

d) letter 'L', 'D' and 'W'. The probability of pick either three is $\frac{2}{14} = \frac{1}{7}$

6.

a) $\frac{2}{10} = \frac{1}{5}$

b) $\frac{8}{10} = \frac{4}{5}$

c) red and green

7.

a) $\frac{2}{10} = \frac{1}{5}$

b) $\frac{1}{10}$

c) No, because the experiment we did is only 10 times, the data is not enough. (Answer may vary)

8.

a) 20 times

b) $\frac{4}{20} = \frac{1}{5}$

c) $\frac{10}{20} = \frac{1}{2}$

d) $\frac{4 \times 5}{20 \times 5} = \frac{20}{100}$, expect to get number "1" 20 times.

9.

a) 20 times

b) $\frac{3}{20}$

c) $\frac{3 \times 10}{20 \times 10} = \frac{30}{200}$, expect to get heart 30 times.

10.

a) 50

b) $\frac{10}{50} = \frac{1}{5}$

c) $\frac{3}{50}$

d) $\frac{3 \times 40}{50 \times 40} = \frac{120}{2000}$, expect 120 students having 4 pets

e) No, because the survey was conducted in school, the target was limited to students. (Answer may vary)

11.

    a) 100

    b) $\frac{10}{100} = \frac{1}{10}$

    c) $\frac{28}{100} = \frac{14}{50} = \frac{7}{25}$

    d) $\frac{2 \times 10}{100 \times 10} = \frac{20}{1000}$, expect 20 students work more than 30 hours

12.

    $25\% = \frac{25}{100} = \frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20}$

    Red marble is 5, yellow marble is $20 - 5 = 15$

13.

    a) $1^{st} = \frac{10}{1000} = 1\%$

                $2^{nd} = \frac{100}{1000} = 10\%$

                $3^{rd} = \frac{370}{1000} = 37\%$

                $4^{th} = \frac{520}{1000} = 52\%$

    b) there will be 1 person winning the powerball in 76,676,600 people. (Answer may vary)

14.

    N/A