Name: _____ **Show work needed to justify your answer.** Date: _____

HW: # 31: Math IBSL - Standard 30 - Theoretical and Experimental Probability

5 points

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3 Thys has signed up to do a drama production at school. He discovers that the director of the production is going to randomly allocate students to roles. There are 20 places in the chorus, 10 minor speaking roles and 5 main speaking roles. What is the probability that Thys will be in the chorus?

$P(\text{chorus}) = \frac{20}{35} = \frac{4}{7}$

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4 An octahedral (eight-sided) dice is thrown. The faces are numbered 1 to 8. Find the probability that the number thrown is:

a an even number

b a multiple of 3

c a multiple of 4

d not a multiple of 4

e less than 4

f a 9.

a) $\frac{1}{2}$

b) $\frac{2}{8} = \frac{1}{4}$

c) $\frac{2}{8} = \frac{1}{4}$

d) $\frac{6}{8} = \frac{3}{4}$

e) $\frac{3}{8}$

f) $\frac{0}{8}$

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5 Each letter of the word STATISTICS is written on a separate card. The 10 cards are placed face down and a card is drawn at random.

What is the probability of picking a card with:

a the letter C **b** the letter P

c a vowel.

(a) $\frac{1}{10}$

(b) $\frac{0}{10}$

(c) $\frac{3}{10}$

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8 A spinner has sections that are coloured red, blue, green and yellow. The probabilities of getting a red and getting a blue are shown in the table. The probability of getting green is twice that of getting yellow.

Colour	Red	Yellow	Blue	Green
Frequency	0.4	0.1	0.3	0.2

Find the probability of getting green.

$3x = .3 \quad x = 0.1$

0.2 or 20%