Twig	Logic: Bayesian Robots						
NAME:							
CLASS:							
DATE:							
	Basic						
1) The six sides of a die are a) P(6)	numbered 1, 2, 3, 4, 5 and b) P(1)	6. Calculate:	c) P(even number)				
d) P(7)	e) P(prime number	r)	f) P(>4)				
2) A letter is chosen at rando a) maths	om from a given word. Find b) mathematics	P(vowel) if the	word is: c) triangle				
d) parallelogram	e) degree		f) probability				
3) The six sides of a die are numbered 1, 2, 3, 4, 5 and 6. Calculate the probability that the number rolled is:a) even and less than 4b) greater than 2 and odd							
c) greater than 2 and less than 4		d) less than 6 and odd					
e) greater than 2 and prime		f) greater than 5 and odd					
4) A die is thrown twice. Calculate the probability that:a) two even numbers are obtained		b) the same two numbers are obtained.					
5) A bag contains three red I What is the probability that t a) both yellow?	balls and seven yellow balls hey are: b) both red?	s. Two balls are	taken from the bag. c) one is red and one is yellow?				

Twig	Logic: Bayesian Robots				
NAME:					
CLASS:					
DATE:					
	Core				
1) The six sides of a die are numbered 1, 2 a) even and less than 4	2, 3, 4, 5 and 6. Calculate the probability that the number rolled is: b) greater than 2 and odd				
c) greater than 2 and less than 4	d) less than 6 and odd				
e) greater than 2 and prime	f) greater than 5 and odd				
2) A die is thrown twice. Calculate the probability of two even numbers are obtained	bability that: b) the same two numbers are obtained.				
3) A bag contains three red balls and seve What is the probability that they are:	n yellow balls. Two balls are taken from the bag.				
a) both yellow? b) bo	th red? c) one is red and one is yellow?				
4) During the month of January, an estimate for the probability of rain on any day is 0.7 if it rained the previous day, and 0.4 if it did not rain the previous day. Find the probability that a wet day is followed by:a) two more wet daysb) two dry days					
c) a dry then a wet day	d) three more wet days				
5) The probability that Sue will go to Mexic that she will go to Mexico in the winter is 0 that she just returned from her winter vaca	to in the winter and to France in the summer is 0.3. The probability 0.7. Find the probability that she will go to France this summer, given tion in Mexico.				

Twig	Logic	c: Bayesian Robots
NAME:		
CLASS:		
DATE:		
	Advanced	
1) A bag contains three What is the probability t	red balls and seven yellow balls. Two bal	lls are taken from the bag.
a) both yellow?	b) both red?	c) one is red and one is yellow?
ous day, and 0.4, if it di a) two more wet days c) a dry then a wet day	d not rain the previous day. Find the proba b) two dry d) three n	ability that a wet day is followed by: y days nore wet days
3) The probability that S that she will go to Mexic that she just returned fr	Sue will go to Mexico in the winter and to F co in the winter is 0.7. Find the probability rom her winter vacation in Mexico.	France in the summer is 0.3. The probability that she will go to France this summer, given
4) Sam takes a driving then the probability thata) Calculate the probab	test. The probability that he will fail on his the will pass the test on any subsequent a vility that Sam will need two attempts and p	first attempt is 0.6. If he fails his first test attempt is also 0.6. passes on his second attempt.
b) Calculate the probab	ility that he will pass on his fourth attempt	t.
	3	



Logic: Bayesian Robots

			ANSWERS		
			Basic		
1) a) $\frac{1}{6}$	b) $\frac{1}{6}$	c) $\frac{1}{2}$	d) 0	e) $\frac{1}{2}$	f) $\frac{1}{3}$
2) a) $\frac{1}{5}$	b) $\frac{4}{11}$	c) $\frac{3}{8}$	d) $\frac{5}{13}$	e) $\frac{1}{2}$	f) $\frac{4}{11}$
3) a) $\frac{1}{6}$	b) $\frac{1}{3}$	c) $\frac{1}{6}$	d) $\frac{1}{2}$	e) $\frac{1}{3}$	f) 0
4) a) $\frac{1}{4}$	b) $\frac{1}{6}$				
5) a) $\frac{7}{15}$	b) $\frac{1}{15}$	c) $\frac{7}{15}$			
			Core		
1) a) $\frac{1}{6}$	b) $\frac{1}{3}$	c) $\frac{1}{6}$	d) $\frac{1}{2}$	e) $\frac{1}{3}$	f) 0
2) a) $\frac{1}{4}$	b) $\frac{1}{6}$				
3) a) $\frac{7}{15}$	b) $\frac{1}{15}$	c) $\frac{7}{15}$			
4) a) 0.49	b) 0.18	c) 0.12	d) 0.343		
5) $\frac{3}{7}$					
			Advanced		
1) a) $\frac{7}{15}$	b) $\frac{1}{15}$	c) $\frac{7}{15}$			
2) a) 0.49	b) 0.18	c) 0.12	d) 0.343		
3) $\frac{3}{7}$					
4) a) 0.36	b) 0.0576				