Pre-Calculus Multiple Choice Questions - Chapter S12

1 What is the probability of rolling a two on one roll of a fair, six-sided die?

a 1/6 **b** 1/2

c 1/3 **d** 1/12

	S12.1

2 What is the probability of rolling an even number on one roll of a fair, six-sided die?

a 1/6 **b** 1/3

c 1/12 **d** 1/2

	S12.1

3 What is the probability of not rolling a 7 on one roll of two fair, six-sided dies when adding the values?

a 1/6 **b** 2/3

c 1/3 **d** 5/6

	S12.1

1 Farmer Bob has a choice of three shirts, two pairs of pants, and four boots to wear on a given day. How many different outfits can Farmer Bob wear on that given day?

a	32	**b**	12
c	24	**d**	9

S12.2

2 For lunch, three different meats, six different veggies, and two different beverages are offered. How many different lunches are possible?

a	11	**b**	24
c	18	**d**	36

S12.2

3 For a training session, there are seven classes offered in the first time block, 5 in the second time block, eight in the third time block, and two in the final time block. How many different schedules are possible for this training session?

a	560	**b**	280
c	1120	**d**	2240

S12.2

Pre-Calculus Multiple Choice Questions - Chapter S12

1 For lunch, chicken, beef, and pork are served as meats, carrots or celery are served as veggies, baked potato, french fries, chips, or hash browns are served as a starch, and lemonade or iced tea is offered as a drink. What is the probability that a randomly selected lunch will have iced tea?

	S12.3

a 0.25   **b** 0.33

c 0.5   **d** 1.0

2 For lunch, chicken, beef, and pork are served as meats, carrots or celery are served as veggies, baked potato, french fries, chips, or hash browns are served as a starch, and lemonade or iced tea is offered as a drink. What is the probability that a randomly selected lunch will have chicken and french fries?

	S12.3

a 0.083   **b** 0.167

c 0.333   **d** 0.521

3 For lunch, chicken, beef, and pork are served as meats, carrots or celery are served as veggies, baked potato, french fries, chips, or hash browns are served as a starch, and lemonade or iced tea is offered as a drink. What is the probability that a randomly selected lunch will have chicken OR beef as the meat but celery as the vegetable?

	S12.3

a 0.167   **b** 0.333

c 0.421   **d** 0.487

1 Evaluate $_6P_4$

a 120	**b** 240
c 360	**d** 720

	S12.4

2 How many different permutations can be formed form the letters of the word horse?

a 30	**b** 60
c 90	**d** 120

	S12.4

3 A doctor has five examination rooms. There are five patients in the waiting room. In how many different ways can the patients be assigned to examination rooms?

a 30	**b** 60
c 90	**d** 120

	S12.4

1 How many different 11-member football teams can be formed form a possible 20 players assuming any player can play any position?

a	167 960	**b**	95 220
c	189 241	**d**	42 525

	S12.5

2 How many different poker hands consisting of five cards can be dealt from a deck of 52 cards?

a	3 582 656	**b**	5 478 989
c	2 598 960	**d**	1 212 369

	S12.5

3 Evaluate $_5C_5$

a	1	**b**	5
c	60	**d**	120

	S12.5

1 In a certain game, a fair die is rolled and a player gains 20 points if the die shows a "6." If the die does not show a "6," the player loses 3 points. If the die were to be rolled 100 times, what would be the expected total gain or loss for the player?

	S12.6

a A gain of about 1700 points   **b** A gain of about 583 points

c A gain of about 83 points   **d** A loss of about 250 points

e A loss of about 300 points

2 A large company is considering opening two new factories in different towns. If it opens in town A, it can expect to make $63000 a profit per year with a probability of 4/7. However, if it opens in town B, it can expect to make a profit of $77000 with a probability of only 3/7. What is the company's mathematical expectation?

	S12.6

a $69000   **b** $71000

c $63000   **d** $77000

3 A contractor is bidding on a road construction job that promises a profit of $200,000 with a probability of 7/10 and a loss, due to strikes, weather conditions, late arrival of building materials, and so on, of $40,000 with a probability of 3/10. What is the contractor's mathematical expectation?

	S12.6

a $40,000   **b** $128,000

c $160,000   **d** $200,000

1 What are the odds in favor of the Milwaukee Brewers winning the World Series if the probability of their winning is 4/223 and the probability of their losing is 219/223?

a	219:4	**b**	4:223
c	4:219	**d**	219:223

	S12.7

2 What are the odds in favor of getting a face card when selecting a card at random from a deck of 52 playing cards?

a	6:26	**b**	12:40
c	3:13	**d**	3:10

	S12.7

3 What are the odds of getting an ace when selecting a card at random from a deck of 52 playing cards?

a	4:52	**b**	2:26
c	1:12	**d**	1:13

	S12.7