

$14^2 = 11^2 + 17^2 - 2(11)(17)\cos M$

Subtract

Divide

$\cos^{-1}()$

$25^\circ \cdot \frac{\pi}{180} =$

$\sin 32 = \frac{3}{x}$

May 29-8:49 AM

Semester Review C

May 25-10:24 AM

An website requires a password. This password must be 3 letters, and 2 numbers. Find the total number of possible passwords if...

There can be no repeats: $\underline{26} \cdot \underline{25} \cdot \underline{24} \cdot \underline{10} \cdot \underline{9}$
1,404,000

Letters and numbers can repeat: $\underline{26} \cdot \underline{26} \cdot \underline{26} \cdot \underline{10} \cdot \underline{10}$
1,757,600

May 25-10:26 AM

Bob is creating place for his pet dog. To create the ideal habitat he must choose from 4 types of dog houses, 3 types of dog collars, 2 types of dog food, and 2 types of food bowls.

If Bob picks one of each, how many different habitats can Bob set up?

$$4 \cdot 3 \cdot 2 \cdot 2 = 48$$

May 25-10:28 AM

Permutations

NUMBERS	ALGEBRA
The number of permutations of 7 items taken 3 at a time is ${}_7P_3 = \frac{7!}{(7-3)!} = \frac{7!}{4!}$	The number of permutations of n items taken r at a time is ${}_nP_r = \frac{n!}{(n-r)!}$

May 25-10:33 AM

Use the formula for permutations or combinations to answer each question:

How many ways can a student government select a president, vice president, secretary, and treasurer from a group of 6 people?

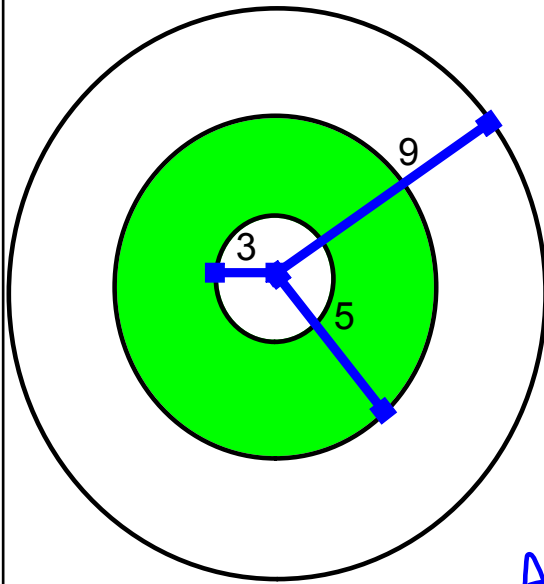
$${}_6P_4 = \frac{6!}{(6-4)!} = \frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot \cancel{2 \cdot 1}}{\cancel{2 \cdot 1}} = 360$$

A teacher wants to choose 3 students from a class of 30 to receive extra credit. How many ways could the teacher select the students to earn extra credit?

$${}_{30}C_3 = \frac{30!}{3! \cdot 27!} = \frac{30 \cdot 29 \cdot 28 \cdot \cancel{27!}}{3 \cdot 2 \cdot 1 \cdot \cancel{27!}} = 406$$

May 25-10:35 AM

The radius of each circle is given. Leave pi in your fractions in order to reduce.



What is the probability that a point chosen at random lands in the smallest circle?

$$A_{sm} = \pi 3^2$$

$$A_{lg} = \pi 9^2$$

$$\frac{9\pi}{81\pi} = \frac{1}{9}$$

What is the probability a point chosen at random lands in the shaded ring?

$$A_{sh} = \pi \cdot 9^2 - \pi 3^2$$

$$81\pi - 9\pi$$

$$72\pi$$

$$\frac{72\pi}{81\pi} = \frac{8}{9}$$

May 25-10:36 AM

Jack rolls a die numbered 1-6. Find each probability.

Jack rolls a 2 $\frac{1}{6}$

Jack rolls a 2 or 4

$$\frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \frac{1}{3}$$

Jack rolls an even number or a number less than 4

$$\frac{3}{6} + \frac{3}{6} - \frac{1}{6} = \frac{5}{6}$$

{1, 2, 3, 4, 5, 6}

May 25-10:45 AM

Jill (related to Jack) rolls 2 number cubes. Find each probability.

The product is 12

$$\frac{4}{36} = \frac{1}{9}$$

The sum is 7

$$\frac{6}{36} = \frac{1}{6}$$

The sum is less than seven

$$\frac{15}{36} = \frac{5}{12}$$

1	1	1	2	1	3	1	4	1	5	1	6
2	1	2	2	2	3	2	4	2	5	2	6
3	1	3	2	3	3	3	4	3	5	3	6
4	1	4	2	4	3	4	4	4	5	4	6
5	1	5	2	5	3	5	4	5	5	5	6
6	1	6	2	6	3	6	4	6	5	6	6

May 25-10:47 AM

Using a standard deck of cards, find the probability of:

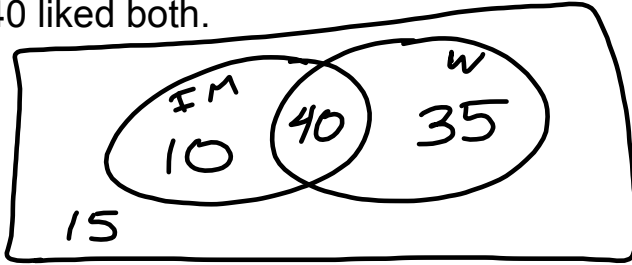
selecting a club $\frac{13}{52} = \frac{1}{4}$

selecting a club, replacing it, and then selecting a 3

$$\frac{13}{52} \cdot \frac{4}{52} \quad \frac{1}{4} \cdot \frac{1}{13} = \frac{1}{52}$$

May 25-10:49 AM

Of 100 students surveyed, 75 liked Wolverine, 50 liked Iron Man, and 40 liked both.



$$\begin{array}{r} 100 \\ -10 \\ -40 \\ -35 \\ \hline 15 \end{array}$$

What is the probability that a person chosen at random likes Wolverine or Iron Man?

$$\frac{10}{100} + \frac{40}{100} + \frac{35}{100} = \frac{85}{100} = R$$

What is the probability that a person chosen at random does not like either Wolverine or Iron Man?

$$\frac{15}{100} = R$$

May 25-10:52 AM



Assignment:

Semester Review C



May 25-10:59 AM