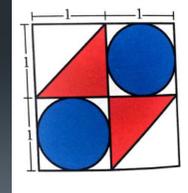


# RISK

Honors Precalculus P4-P5

#1

- Find the exact probability that a dart thrown at the square dartboard below will land in ONE of the circular regions.

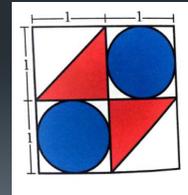


*Make your wager*



#1

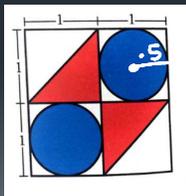
- Find the exact probability that a dart thrown at the square dartboard below will land in ONE of the circular regions.



$$A_{\square} = 2 \cdot 2 = 4$$

$$\#1 \quad A_{\circ} = \pi r^2 = \pi \left(\frac{1}{2}\right)^2 = \frac{1}{4} \pi \times 2 \text{ } \circ\text{'s} = \frac{\pi}{2}$$

- Find the exact probability that a dart thrown at the square dartboard below will land in ONE of the circular regions.



$$P(\circ) = \frac{\frac{\pi}{2}}{4}$$

$$P(\circ) = \frac{\pi}{8}$$

#2

- Find the probability that Freddie, who arrives home at 6:42pm, is home to receive a call that can come anytime between 6:40 and 6:50pm.

**Make your wager**



**#2**

- Find the probability that Freddie, who arrives home at 6:42pm, is home to receive a call that can come anytime between 6:40 and 6:50pm.

**#2**

- Find the probability that Freddie, who arrives home at 6:42pm, is home to receive a call that can come anytime between 6:40 and 6:50pm.

$$2/5 = \frac{1}{5}$$

**#3**

- Find the probability that a point on a 12-inch ruler is chosen at random and is located within an inch of an end of the ruler.

**Make your wager**



**#3**

- Find the probability that a point on a 12-inch ruler is chosen at random and is located within an inch of an end of the ruler.

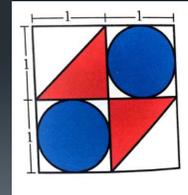
#3

- Find the probability that a point on a 12-inch ruler is chosen at random and is located within an inch of an end of the ruler.

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

#4

- Find the approx. probability that a dart thrown at the square dartboard below will land in one of the white regions.

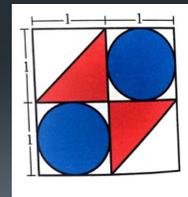


*Make your wager*



#4

- Find the approx. probability that a dart thrown at the square dartboard below will land in one of the white regions.

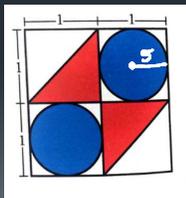


$$A_{\square} = 2 \cdot 2 = 4$$

$$A_{\odot} = \pi r^2 = \frac{1}{4} \pi \times 2 = \frac{1}{2} \pi$$

$$\#4 \ A_{\triangle} = \frac{b \cdot h}{2} = \frac{1}{2} \times 2 = 1$$

- Find the approx. probability that a dart thrown at the square dartboard below will land in one of the white regions.



$$p = \frac{4 - 1 - \frac{1}{2} \pi}{4}$$

$$= \frac{3 - \frac{1}{2} \pi}{4}$$

$$= \frac{3}{4} - \frac{1}{8} \pi$$

#5 What is the probability that a female went on vacation.

	Vacation	No Vacation
Male	55	50
Female	40	30

**Make your wager**



**#5** What is the probability of selecting a female that went on vacation.

	Vacation	No Vacation
Male	55	50
Female	40	30

**#5** What is the probability of selecting a female that went on vacation.

	Vacation	No Vacation
Male	55	50
Female	40	30

$40/175$  or  $8/35$

**#6**

- Given that a person did not go on vacation, what is the probability that they are male?

	Vacation	No Vacation
Male	55	50
Female	40	30

**Make your wager**



**#6**

- Given that a person did not go on vacation, what is the probability that they are male?

	Vacation	No Vacation
Male	55	50
Female	40	30

$$P(\text{male} | \text{no vaca}) = \frac{50}{80} = \frac{5}{8}$$

#6

- Given that a person did not go on vacation, what is the probability that they are male?

	Vacation	No Vacation
Male	55	50
Female	40	30

80

#7

- As part of a board game, you need to spin a spinner which is divided into 8 equal parts. Find the probability that you get a 5 on the first spin and a number greater than 3 on your second spin.

*Make your wager*



#7

- As part of a board game, you need to spin a spinner which is divided into 8 equal parts. Find the probability that you get a 5 on the first spin and a number greater than 3 on your second spin.

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- As part of a board game, you need to spin a spinner which is divided into 8 equal parts. Find the probability that you get a 5 on the first spin and a number greater than 3 on your second spin.

$$\frac{1}{8} \cdot \frac{5}{8} = \left( \frac{5}{64} \right)$$

#8

- You pick a card from a standard deck. Find the probability that you draw a 2 or a Heart.

*Make your wager*



#8

- You pick a card from a standard deck. Find the probability that you draw a 2 or a Heart.

#8

- You pick a card from a standard deck. Find the probability that you draw a 2 or a Heart.

$$\frac{4}{52} + \frac{13}{52} - \frac{1}{52} = \frac{16}{52} = \boxed{\frac{4}{13}}$$

#9

- At a school, 60 percent of students buy a school lunch. What is the probability that out of 5 students, exactly 2 buy lunch? (Hint: Use Binomial Distribution)

*Make your wager*



#9

- At a school, 60 percent of students buy a school lunch. What is the probability that out of 5 students, exactly 2 buy lunch? (Hint: Use Binomial Distribution)

#9

At a school, 60 percent of students buy a school lunch. What is the probability that out of 5 students, exactly 2 buy lunch? (Hint: Use Binomial Distribution)

$$10 \cdot (.6)^2 (4)^3 = 23.04\%$$

#10

- In a survey of 50 hospital patients, 20 said they were satisfied with the nursing care, 25 said they were satisfied with the medical treatment, and 5 said they were satisfied with both.
- A) How many patients were satisfied with neither?
- B) How many were satisfied with ONLY the medical treatment?

*Make your wager*

#10

- In a survey of 50 hospital patients, 20 said they were satisfied with the nursing care, 25 said they were satisfied with the medical treatment, and 5 said they were satisfied with both.
- A) How many patients were satisfied with neither?
- B) How many were satisfied with ONLY the medical treatment?

#10

- In a survey of 50 hospital patients, 20 said they were satisfied with the nursing care, 25 said they were satisfied with the medical treatment, and 5 said they were satisfied with both.
- A) How many patients were satisfied with neither? **10**
- B) How many were satisfied with ONLY the medical treatment? **20**

#11

