



PROBABILITY - ANALYTIC GEOMETRY TEST

4° ESO



Exercise 1: (1.5 ptos) I get two cards from a Spanish deck of cards, without replacement. Find the probability that:

- They are both spade cards
- I get a king and a horse
- I get at least a face card

Exercise 2: (1.5 ptos) 18% of the people subscribed to a certain video platform have watched "La casa de papel", 15% have watched "The squid game", and 7% of them watched both series. Taking a random spectator find the probability that:

- They watched any of the series
- They did not watch any of them
- They watched "La casa de papel" knowing that they watched "The squid game"

Exercise 3: (2 ptos) In a certain city, a company has electric motorbikes and scooters for renting. 65% of their vehicles are motorbikes, and 7% of them have a defective battery, while 12% of the scooters also have a defective battery. Taking a random vehicle find the probability that:

- The battery is not defective
- I have rented a scooter given that the battery was defective... (and I got stranded in the middle of the street while the thermometer reached 44° C)

Exercise 4: (1.25 ptos) Find the continuous and general equations of the straight line that goes through the points $A(-2,3)$ and $B(1,-5)$

Exercise 5: (1.25 ptos) Given the straight line $r \equiv \frac{2-x}{3} = \frac{y+5}{2}$

- Find a point and the direction vector
- Find the general equation of a perpendicular line that goes through the point $P(7,-1)$

Exercise 6: (1.5 ptos) Given the straight line $r \equiv 3x - y - 5 = 0$

- Write its parametric and continuous equation
- Write the general equation of a parallel line going through the point $B(-5,2)$

Exercise 7: (1 pto) Find the symmetric of $P(4,7)$ with respect to the point $S(-2,5)$

