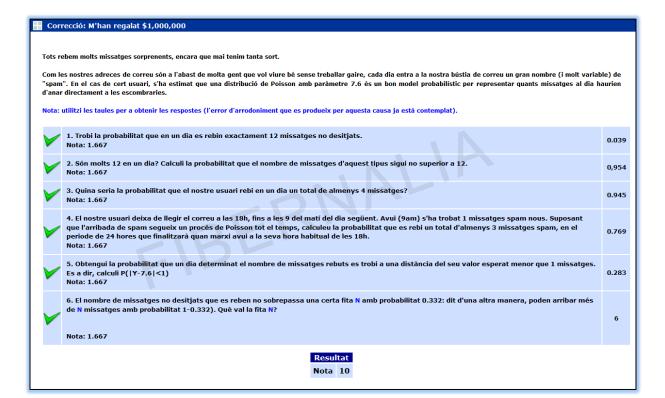
Probabilitat i Estadística FIB-UPC

Problemes d'e-status: M'han regalat \$1,000,000





Script en R

```
lambda = 7.6
p1 = dpois(12, lambda) # Amb taules: P(X = 12) = F(12, 7.6) -
F(11, 7.6) = 0,954 - 0.915 = 0.039
p2 = ppois(12, lambda) # P(X <= 12) = F(12, 7.6) = 0,954
p3 = 1 - ppois(3, lambda) # P(X >= 4) = 1 - P(X <= 3) =
1 - F(3, 7.6) = 1 - 0.055 = 0.945
|----|
18h
               18h Per tal de rebre >= 3 en 24 hores,
          9h
                         ha de rebre >= 2 en 9 hores
 1 missatge
<---->
 15 hores 9 hores
p4 = 1 - ppois(1, (lambda/24)*9) # P(X >= 2) = 1 - P(X <= 1) =
1 - F(1, (7.6/24)*9) = 1 - F(1, 2.8) = 0.769
|----|
         7.6
                         A distància < 1 estan el 7 i el 8
```

```
p5 = ppois(8,lambda) - ppois(6,lambda) # P(7 <= X <= 8) =
P(6 < X <= 8) = F(8, 7.6) - F(6, 7.6) = 0.648 - 0.365 = 0.283

p6 = qpois(0.332,lambda) # La probabilitat 0.332 es troba
entre x=5 i x=6

p1; p2; p3; p4; p5; p6</pre>
```

Consola de R

```
> lambda = 7.6
> p1 = dpois(12,lambda)
> p2 = ppois(12,lambda)
> p3 = 1 - ppois(3,lambda)
> p4 = 1 - ppois(1,(lambda/24)*9)
> p5 = ppois(8,lambda) - ppois(6,lambda)
> p6 = qpois(0.332,lambda)
> p1; p2; p3; p4; p5; p6

[1] 0.0387961
[1] 0.953566
[1] 0.9446287
[1] 0.7772994
[1] 0.2835706
[1] 6
```