

Actividad #6

- Hallar los cuartiles 1, 2, y 3 de los siguientes datos no agrupados

a) $35, 20, 15, 5, 3, 5, 6, 21 = 3, 5, 5, 6, 15, 20, 21, 35$

$Q_1 = 3, 5, 5, 6, 15, 20, 21, 35$

$$Q_1 = \frac{1(8+1)}{4} = \frac{1(9)}{4} = \frac{9}{4} = 2.25$$

R//: El cuartil uno es 5. $3, 5, 5, 6, 15, 20, 21, 35$

Q_2

$$Q_2 = \frac{2(8+1)}{4} = \frac{2(9)}{4} = \frac{18}{4} = 4.5$$

R//: El cuartil dos es 10.5

$3, 5, 5, 6, 15, 20, 21, 35$

$$Q_2 = 6 + (15 - 6)(0.5) \rightarrow Q_2 = 6 + (9)(0.5) \rightarrow$$

$$Q_2 = 6 + 4.5 \rightarrow Q_2 = 10.5$$

Q_3

$$Q_3 = \frac{3(8+1)}{4} = \frac{3(9)}{4} = \frac{27}{4} = 6.75$$

R//: El cuartil tres es 21

$3, 5, 5, 6, 15, 20, 21, 35$

$$Q_3 = 20 + (21 - 20)(0.75) \rightarrow Q_3 = 20 + (1)(0.75) \rightarrow$$

$$Q_3 = 20 + 0.75 = 20.75 \rightarrow 21$$

b) 15, 22, 30, 18, 50, 81 = 15, 18, 22, 30, 50, 81

$$Q_1 = \frac{1((n+1))}{4} = \frac{1(7)}{4} = \frac{7}{4} = 1.75$$

R// El cuartil uno
es 16.5

$$Q_1 = 15 + (18 - 15)(0.75) \rightarrow Q_1 = 15 + (3)(0.75) \rightarrow Q_1 = 15 + 1.5 = 16.5$$

Q_2

$$Q_2 = \frac{2((n+1))}{4} = \frac{2(7)}{4} = \frac{14}{4} = 3.5$$

R// El cuartil dos
es 26

$$Q_2 = 22 + (30 - 22)(0.5) \rightarrow Q_2 = 22 + (8)(0.5) \rightarrow Q_2 = 22 + 4 = 26$$

Q_3

$$Q_3 = \frac{3((n+1))}{4} = \frac{3(7)}{4} = \frac{21}{4} = 5.25$$

R// El cuartil tres
es 57.25

$$Q_3 = 50 + (81 - 50)(0.25) \rightarrow Q_3 = 50 + (31)(0.25) \rightarrow Q_3 = 50 + 7.25 = 57.25$$

c). $22, 14, 16, 41. = 14, 16, 22, 41.$

$Q_1 =$

$$Q_1 = \frac{1(4+1)}{4} = \frac{1(5)}{4} = \frac{5}{4} = 1.25$$

14.05

14, 16, 22, 41

R// El cuartil uno es 14.5

$$Q_1 = 14 + (16 - 14)(0.25) \rightarrow Q_1 = 14 + (2)(0.25)$$

$$Q_1 = 14 + 0.5 = 14.5$$

$Q_2 =$

$$Q_2 = \frac{2(4+1)}{4} = \frac{2(5)}{4} = \frac{10}{4} = 2.5$$

19

14, 16, 22, 41

R// El cuartil dos es 19

$$Q_2 = 16 + (22 - 16)(0.5) \rightarrow Q_2 = 16 + (6)(0.5) \rightarrow Q_2 = 16 + 3 = 19$$

$Q_3 =$

$$Q_3 = \frac{3(4+1)}{4} = \frac{3(5)}{4} = \frac{15}{4} = 3.75$$

31.5

14, 16, 22, 41

R// El cuartil tres es 31.5

$$Q_3 = 22 + (41 - 22)(0.75) \rightarrow Q_3 = 22 + (19)(0.75) \rightarrow Q_3 = 22 + 14.25 = 36.25$$

31.5

VIVA