Quartiles for Grouped Data Total points = 48

Scores of 10–Tesla Students in the 4^{th} Periodic Test in Mathematics

		✓
Score	f	cf<
46 – 50	2	50
41 – 45	9	48
36 – 40	13	39
31 – 35	11	26
26 – 30	10	15
21 – 25	5	5
i=5	N = 50 ✓	

1.	$\frac{2(50)}{4} = 25 \checkmark$ $31 - 35 Q_{2} \checkmark$ $Q_{2} = Ib + \begin{bmatrix} \frac{2N}{4} - cf_{b} \\ f_{Q_{2}} \end{bmatrix} i \checkmark$ $\begin{bmatrix} 1(50) & 15 \end{bmatrix} 3.$	$Q_3 = 35.5 + \left[\frac{3(50)}{4} - 26 \over 13} \right] 5 \checkmark$
	$Q_2 = lb + \left \frac{\overline{4} - cf_b}{f_{Q_2}} \right i \checkmark$	$Q_3 = 35.5 + 4.423 \checkmark$ $Q_3 = 39.92 \checkmark$
	$Q_2 = 30.5 + \begin{bmatrix} \frac{1(50)}{2} - 15 \\ \frac{11}{2} \end{bmatrix} = \begin{bmatrix} 3. \\ 5 \checkmark \end{bmatrix}$	$\frac{(50)}{4} = 12.5 \checkmark 26 - 30 Q_1 \checkmark$
	$\begin{bmatrix} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ Q_2 = 30.5 + 4.545 \checkmark \\ & & \\ & & & \\ Q_2 = 35.05 \checkmark \end{bmatrix} 3.$	$Q_1 = lb + \left \frac{\frac{N}{4} - cf_b}{f_{Q_1}} \right i \checkmark$
	2(72)	$Q_1 = 25.5 + \left[\frac{\frac{50}{4} - 5}{10} \right] 5 \checkmark$
2.	$\frac{3(50)}{4} = 37.5 \checkmark$	$Q_1 = 25.5 + 3.75 \checkmark$
	$36 - 40 Q_3 \checkmark$	$Q_1 = 29.25 \checkmark$
	$Q_3 = Ib + \left[\frac{3N}{4} - cf_b \right] i \checkmark 4.$	$IQR = Q_3 - Q_1 \checkmark$ $IQR = 39.92 - 29.25 \checkmark$ $IQR = 10.67 \checkmark$

Number of Mistakes Made by 50 Students in Factoring Quadratic Equations

		<u> </u>
Number of Mistakes	f	cf<
18 – 20	2	50
15 – 17	5	48
12 – 14	6	43
9 – 11	10	37
6 – 8	15	27
3 – 5	8	12
0 – 2	4	4
i _ 2 /	N — 50 /	

5.
$$\frac{2(50)}{4} = 25$$
 \checkmark $Q_3 = 11.5 + \left[\frac{3(50)}{4} - 37\right] 3$ \checkmark $Q_2 = lb + \left[\frac{2N}{4} - cf_b\right] i$ \checkmark $Q_3 = 11.5 + 0.25$ \checkmark $Q_3 = 11.5 + 0.25$ \checkmark $Q_3 = 11.75$ \checkmark $Q_4 = 11.75$ \checkmark $Q_5 = 11.75$ \checkmark $Q_7 = 11.75$ \checkmark $Q_8 = 11.75$ \checkmark $Q_9 = 11.75$ \checkmark $Q_9 = 11.75$ \checkmark $Q_9 = 11.75$ \checkmark $Q_1 = lb + \left[\frac{N}{4} - cf_b\right] i$ \checkmark $Q_1 = 10$ \checkmark

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21 – 25	5	5
i = 5 √	N = 50 ✓	

1.
$$\frac{2(50)}{4} = 25 \checkmark$$

$$31 - 35 \quad Q_{2} \checkmark$$

$$Q_{2} = lb + \begin{bmatrix} \frac{2N}{4} - cf_{b} \\ f_{Q_{2}} \end{bmatrix} i \checkmark \qquad Q_{3} = 35.5 + \begin{bmatrix} \frac{3(50)}{4} - 26 \\ 13 \end{bmatrix} 5 \checkmark$$

$$Q_{2} = 30.5 + \begin{bmatrix} \frac{1(50)}{2} - 15 \\ 11 \end{bmatrix} \begin{bmatrix} 3. & \frac{(50)}{4} = 12.5 \checkmark \\ 26 - 30 & Q_{1} \checkmark \end{bmatrix}$$

$$Q_{1} = lb + \begin{bmatrix} \frac{N}{4} - cf_{b} \\ f_{Q_{1}} \end{bmatrix} i \checkmark$$

$$Q_{2} = 35.05 \checkmark$$

$$Q_{1} = 25.5 + \begin{bmatrix} \frac{50}{4} - 5 \\ 10 \end{bmatrix} 5 \checkmark$$

$$Q_{1} = 25.5 + 3.75 \checkmark$$

$$Q_{1} = 29.25 \checkmark$$

$$Q_{3} = 39.92 - 29.25 \checkmark$$

$$Q_{1} = 25.5 + 3.75 \checkmark$$

$$Q_{2} = 30.5 + 4.545 \checkmark$$

$$Q_{3} = 35.5 + 4.423 \checkmark$$

$$Q_{4} = 12.5 \checkmark$$

$$Q_{1} = 10.5 + \begin{bmatrix} \frac{N}{4} - cf_{b} \\ f_{Q_{1}} \end{bmatrix} i \checkmark$$

$$Q_{1} = 25.5 + 3.75 \checkmark$$

$$Q_{1} = 29.25 \checkmark$$

$$Q_{1} = 29.25 \checkmark$$

$$Q_{2} = 30.5 + 4.545 \checkmark$$

$$Q_{3} = 35.5 + 4.423 \checkmark$$

$$Q_{4} = 12.5 \checkmark$$

$$Q_{1} = 10.5 + 4.545 \checkmark$$

$$Q_{1} = 25.5 + 3.75 \checkmark$$

$$Q_{1} = 29.25 \checkmark$$

$$Q_{2} = 30.5 + 4.545 \checkmark$$

$$Q_{3} = 35.5 + 4.423 \checkmark$$

$$Q_{4} = 12.5 \checkmark$$

$$Q_{1} = 10.5 + 4.545 \checkmark$$

$$Q_{1} = 25.5 + 3.75 \checkmark$$

$$Q_{2} = 29.25 \checkmark$$

$$Q_{3} = 39.92 - 29.25 \checkmark$$

$$Q_{4} = 10.67 \checkmark$$

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3 – 5	8	12
0 – 2	4	4
i=3 ./	N = 50 .	_

5.
$$\frac{2(50)}{4} = 25 \checkmark$$

$$Q_{3} = 11.5 + \begin{bmatrix} \frac{3(50)}{4} - 37 \\ \frac{2N}{6} \end{bmatrix} 3 \checkmark$$

$$Q_{2} = lb + \begin{bmatrix} \frac{2N}{4} - cf_{b} \\ f_{Q_{2}} \end{bmatrix} i \checkmark Q_{3} = 11.5 + 0.25 \checkmark$$

$$Q_{3} = 11.5 + 0.25 \checkmark$$

$$Q_{3} = 11.75 \checkmark$$

$$Q_{3} = 11.5 + 0.25 \checkmark$$

$$Q_{3} = 11.5 + 0.25 \checkmark$$

$$Q_{1} = 10.5 \checkmark$$

$$Q_{1} = lb + \begin{bmatrix} \frac{N}{4} - cf_{b} \\ f_{Q_{1}} \end{bmatrix} i \checkmark$$

$$Q_{1} = lb + \begin{bmatrix} \frac{N}{4} - cf_{b} \\ f_{Q_{1}} \end{bmatrix} i \checkmark$$

$$Q_{1} = 5.5 + 0.1 \checkmark$$

$$Q_{1} = 5.6 \checkmark$$

$$Q_{3} = lb + \begin{bmatrix} \frac{3N}{4} - cf_{b} \\ f_{Q_{3}} \end{bmatrix} i \checkmark$$

$$Q_{1} = 5.5 \div 0.1 \checkmark$$

$$Q_{1} = 5.6 \checkmark$$

$$Q_{1} = 5.5 \div 0.1 \checkmark$$

$$Q_{1} = 5.6 \checkmark$$

$$Q_{1} = 5.5 \div 0.1 \checkmark$$

$$Q_{1} = 5.6 \checkmark$$

$$Q_{1} = 5.6 \checkmark$$

$$Q_{2} = 6.15 \checkmark$$