Percentiles for Grouped Data

 $P_k = lb + \left\lceil \frac{\frac{kN}{10} - cf_b}{f_{P_k}} \right\rceil i$

lower boundary of the P_k class Ιb where:

 f_{P_k} = frequency of the P_k class

 cf_b cumulative frequency of the class

before the P_k class

 n_{th} quartile, where n=1, 2, and 3 k

size of class interval Ν total frequency

Practice Exercises

Calculate the given fractiles for each frequency distribution table.

Mid-year Test Scores of Students in Math

Score	Frequency
41 – 45	1
36 – 40	8
31 – 35	8
26 – 30	14
21 – 25	7
16 – 20	2

Compute the following.

- 1. P_{23}
- 2. P_{93}
- P_{15} 3.
- P_{65} 4.
- P_{78}

Weights of 8-Tesla Students

Weight in kg	Frequency
40 - 44	1
45 – 49	14
50 - 54	15
55 – 59	21
60 - 64	14
65 – 69	10
70 – 74	4
75 – 79	1
	.,,

Compute the following.

- 6. P₃₆
- 7. P_{53}
- P_{18}
- P_{67}
- 10. P_{85}

21 - 25Number of Mistakes Made by 50 **Students in Factoring Quadratic Equations**

Problem Set

Score

46 - 50

41 – 45

36 - 40

31 - 35

26 - 30

Number of Mistakes	Frequency
0 – 2	4
3 – 5	8
6 – 8	15
9 – 11	10
12 – 14	6
15 – 17	5
18 – 20	2

Compute the following.

- 1. P₇₆
- P_{93} 2.

Calculate the given fractiles for each frequency distribution table.

Frequency

9

13

11

5

Scores of 10-Tesla Students in the 4th Periodic Test in Mathematics

- 3 P_{61}
- 4 P_{77}
- P_{38}

Compute the following.

- 6. P_{27}
- P_{39} 7.
- 8. P_{81}
- P_{56} 9.
- P_{68} 10.

Percentiles for Grouped Data

$$P_k = Ib + \left[\frac{\frac{kN}{10} - cf_b}{f_{P_k}} \right] i$$

where:

Ιb lower boundary of the P_k class

 f_{P_k} frequency of the P_k class

cumulative frequency of the class cf_b

before the P_k class

 n_{th} quartile, where n = 1, 2, and 3

size of class interval Ν total frequency

Practice Exercises

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Mid-year Test Scores of Students in Math

Score	Frequency
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Weights of 8-Tesla Students

Weight in kg	Frequency
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55 – 59	21
60 - 64	14
65 – 69	10
70 – 74	4
75 – 79	1

1. P_{23}

- 2. P₉₃

Compute the following.

- 6. *P*₃₆
- 7. *P*₅₃
- 8. *P*₁₈
- 9. P_{67}
- 10. P₈₅

Problem Set

Calculate the given fractiles for each frequency distribution table.

Scores of 10-Tesla Students in the 4th Periodic Test in Mathematics

Score	Frequency
46 – 50	2
41 – 45	9
36 – 40	13
31 – 35	11
26 – 30	10
21 – 25	5

Compute the following.

- 1. P₇₆
- P_{93}
- P_{61} 3.
- P_{77}
- P_{38}

Number of Mistakes Made by 50 Students in Factoring Quadratic Equations

Number of Mistakes	Frequency
0 – 2	4
3 – 5	8
6 – 8	15
9 – 11	10
12 – 14	6
15 – 17	5
18 – 20	2

Compute the following.

- 6. P_{27}
- 7. P_{39}
- 8. P_{81} 9. P_{56}
- 10. P_{68}