Sample variance

2.5, 3.5, 4.4, 4.4, 6.7, 6.7, 8.2, 8.3, 8.7, 9.1, 9.5

Five number summary

lowest number : 2.5

highest number 9.5

Median: 6.7

1st quartile : 4.4

3rd quartile 8.7

$8.7 \times \frac{3}{4} =$

$(2.5+3.5+4.4+4.4+6.7+6.7+8.2+8.3+8.7+9.1+9.5) \div 11 = \frac{72}{11} = 6.54545$

$(2.5-\frac{72}{11})^2 = (\frac{2.5}{10}-\frac{72}{11})^2 = \frac{7921}{484}$

$(3.5-\frac{72}{11})^2 = (\frac{35}{10}-\frac{72}{11})^2 = \frac{4489}{484}$

$(4.4-\frac{72}{11})^2 = (\frac{44}{10}-\frac{72}{11})^2 = \frac{13924}{3025}$ → did it twice

$(4.4-\frac{72}{11})^2 = (\frac{44}{10}-\frac{72}{11})^2 = \frac{13924}{3025}$ ✓

$(6.7-\frac{72}{11})^2 = (\frac{67}{10}-\frac{72}{11})^2 = \frac{289}{12100}$ ✓

$(6.7-\frac{72}{11})^2 = (\frac{67}{10}-\frac{72}{11})^2 = \frac{289}{12100}$ ✓

$(8.2-\frac{72}{11})^2 = (\frac{82}{10}-\frac{72}{11})^2 = \frac{8281}{3025}$ ✓

$(8.3-\frac{72}{11})^2 = (\frac{83}{10}-\frac{72}{11})^2 = \frac{37249}{12100}$ ✓

$(8.7-\frac{72}{11})^2 = (\frac{87}{10}-\frac{72}{11})^2 = \frac{56169}{12100}$ ✓

$(9.1-\frac{72}{11})^2 = (\frac{91}{10}-\frac{72}{11})^2 = \frac{78961}{12100}$ ✓

$(9.5-\frac{72}{11})^2 = (\frac{95}{10}-\frac{72}{11})^2 = \frac{4225}{484}$ ✓

The sum $= \frac{16667}{275}$

$\frac{16667}{275} \div 10 = 6.06073$

So the variance is 6.06073