



INDIAN SCHOOL AL WADI AL KABIR

Class IX, Mathematics

Worksheet- Rationalising the denominator

07-05-20

Rationalise the denominator of the following: (with answers)	
Q.1. $\frac{5+\sqrt{3}}{2+\sqrt{5}} = -10 + 5\sqrt{5} - 2\sqrt{3} + \sqrt{15}$	Q.11. $\frac{3+\sqrt{5}}{2+\sqrt{3}} = 6 - 3\sqrt{3} + 2\sqrt{5} - \sqrt{15}$
Q.2. $\frac{4+\sqrt{7}}{5+\sqrt{7}} = \frac{13+\sqrt{7}}{18}$	Q.12. $\frac{5+\sqrt{5}}{2+\sqrt{5}} = -5 + 3\sqrt{5}$
Q.3. $\frac{2+\sqrt{5}}{3+\sqrt{2}} = \frac{6-2\sqrt{2}+3\sqrt{5}-\sqrt{10}}{7}$	Q.13. $\frac{5+\sqrt{7}}{5+\sqrt{2}} = \frac{25-5\sqrt{2}+5\sqrt{7}-\sqrt{14}}{23}$
Q.4. $\frac{5+\sqrt{3}}{4+\sqrt{6}} = \frac{20-5\sqrt{6}+4\sqrt{3}-3\sqrt{2}}{10}$	Q.14. $\frac{4+\sqrt{5}}{5+\sqrt{2}} = \frac{20-4\sqrt{2}+5\sqrt{5}-\sqrt{10}}{23}$
Q.5. $\frac{2+\sqrt{7}}{4+\sqrt{7}} = \frac{1+2\sqrt{7}}{9}$	Q.15. $\frac{5+\sqrt{6}}{4+\sqrt{2}} = \frac{20-5\sqrt{2}+4\sqrt{6}-2\sqrt{3}}{14}$
Q.6. $\frac{5+\sqrt{3}}{4+\sqrt{2}} = \frac{20-5\sqrt{2}+4\sqrt{3}-\sqrt{6}}{14}$	Q.16. $\frac{5+\sqrt{3}}{4+\sqrt{6}} = \frac{20-5\sqrt{6}+4\sqrt{3}-3\sqrt{2}}{10}$
Q.7. $\frac{3+\sqrt{7}}{2+\sqrt{6}} = \frac{-6+3\sqrt{6}-2\sqrt{7}+\sqrt{42}}{2}$	Q.17. $\frac{2+\sqrt{2}}{3+\sqrt{5}} = \frac{6-2\sqrt{5}+3\sqrt{2}-\sqrt{10}}{4}$
Q.8. $\frac{2+\sqrt{7}}{2+\sqrt{5}} = -4 + 2\sqrt{5} - 2\sqrt{7} + \sqrt{35}$	Q.18. $\frac{2+\sqrt{5}}{4+\sqrt{7}} = \frac{8-2\sqrt{7}+4\sqrt{5}-\sqrt{35}}{9}$
Q.9. $\frac{4+\sqrt{2}}{4+\sqrt{7}} = \frac{16-4\sqrt{7}+4\sqrt{2}-\sqrt{14}}{9}$	Q.19. $\frac{5+\sqrt{7}}{5+\sqrt{2}} = \frac{25-5\sqrt{2}+5\sqrt{7}-\sqrt{14}}{23}$
Q.10. $\frac{5+\sqrt{7}}{5+\sqrt{2}} = \frac{25-5\sqrt{2}+5\sqrt{7}-\sqrt{14}}{23}$	Q.20. $\frac{4+\sqrt{5}}{4+\sqrt{6}} = \frac{16-4\sqrt{6}+4\sqrt{5}-\sqrt{30}}{10}$