

# NUMBER SYSTEM

1. Write decimal form of  $\frac{563}{100}$

2. Write decimal form of  $\frac{6}{1000}$

3. Write decimal form of  $\frac{3}{11}$ .

4. Find a rational number between  $-\frac{3}{7}$  and  $\frac{1}{3}$

5. Express  $0.77777\dots$  in  $\frac{p}{q}$  form .

6. Show that  $1.272727\dots$  can be expressed in the form  $\frac{p}{q}$  where  $p$  and  $q$  are integers,  $q \neq 0$ .

7. Express  $\frac{2157}{625}$  in decimal form

8. Convert into  $p/q$  form:  $22.434343\dots$

9. Express  $32.12353535\dots$  in the form  $\frac{p}{q}$ .

10. Write  $0.6 + 0.777\dots + 0.474747\dots$  in the form of  $\frac{p}{q}$ .

11. Write the rationalisation factor of  $\sqrt{50}$ .

12. Simplify  $(3 + \sqrt{3})(2 + \sqrt{2})$ .

13. Simplify  $(3\sqrt{5} - 5\sqrt{2})(4\sqrt{5} + 3\sqrt{2})$ .

14. Simplify  $\frac{2\sqrt{3}}{3} - \frac{\sqrt{3}}{6}$ .

15. Rationalise  $\frac{1}{\sqrt{7}}$

16. Rationalise the denominator  $\frac{1}{\sqrt{7} - \sqrt{6}}$

17. Rationalise the denominator  $\frac{3}{\sqrt{7} - \sqrt{2}}$ .

18. Rationalise  $\frac{6 - 4\sqrt{3}}{6 + 4\sqrt{3}}$ .

19. Simplify  $\frac{\sqrt{6}}{\sqrt{2} + \sqrt{3}} + \frac{3\sqrt{2}}{\sqrt{6} + \sqrt{3}} - \frac{4\sqrt{3}}{\sqrt{6} + \sqrt{2}}$

20. Simplify  $\frac{1}{\sqrt{2} + 1} + \frac{1}{\sqrt{3} + \sqrt{2}} + \frac{1}{\sqrt{4} + \sqrt{3}} + \frac{1}{\sqrt{5} + \sqrt{4}}$