



Find three rational and three irrational numbers between the following:

1. 6.5 & 7.8

2. 2.3 & 3.2

3. $\frac{1}{7}$ & $\frac{2}{7}$

4. $\frac{\sqrt{3}}{2}$ & $\frac{\sqrt{5}}{2}$



5. Represent $\sqrt{5}$ on the number line .

6. Represent $\sqrt{3}$ on the number line .

7. Represent $\sqrt{8}$ on the number line .

8. Represent $\sqrt{9.5}$ on the number line .

Represent the following rational numbers in $\frac{p}{q}$ form :

9. $1.23\overline{7}$

10. $3.74\overline{5}$

11. $8.23\overline{27}$

12. $3.2\overline{38}$

13. Express $\frac{1}{11}$ in $\frac{p}{q}$ form and hence find the value of $\frac{5}{11}$.

Rationalize the denominator of the following :

14. $\frac{1}{\sqrt{8} + \sqrt{7}}$

15. $\frac{4 + 3\sqrt{5}}{4 - 3\sqrt{5}}$



16. $\frac{\sqrt{5} - 2}{\sqrt{5} + 2}$

17. $\frac{2\sqrt{6} - \sqrt{5}}{3\sqrt{5} - 2\sqrt{6}}$

Find the value of 'a' and 'b' if :

18. $\frac{\sqrt{5} - \sqrt{3}}{\sqrt{5} + \sqrt{3}} = a + b\sqrt{3}$

19. $\frac{\sqrt{2} + \sqrt{3}}{3\sqrt{2} - 2\sqrt{3}} = a + b\sqrt{6}$

20. $\frac{\sqrt{5} - \sqrt{3}}{\sqrt{5} + \sqrt{3}} = a + b\sqrt{3}$

21. $\frac{\sqrt{7} - 1}{\sqrt{7} + 1} - \frac{\sqrt{7} + 1}{\sqrt{7} - 1} = a + b\sqrt{7}$

22. Simplify : $5\sqrt{3} + 2\sqrt{27} + \frac{1}{\sqrt{3}}$

23. Simplify : $3\sqrt{147} - \frac{7}{3}\sqrt{\frac{1}{3}} + 7\sqrt{\frac{1}{3}}$

24. Rationalize the denominator : $\frac{1}{\sqrt{6} + \sqrt{5} - \sqrt{11}}$