your doubts

Square root spiral:

1) In which quadrant does point (2, –2) lie?

2) What is the distance of point (–5, 3) from x-axis?

3) What is the distance of point (6, –8) from y-axis?

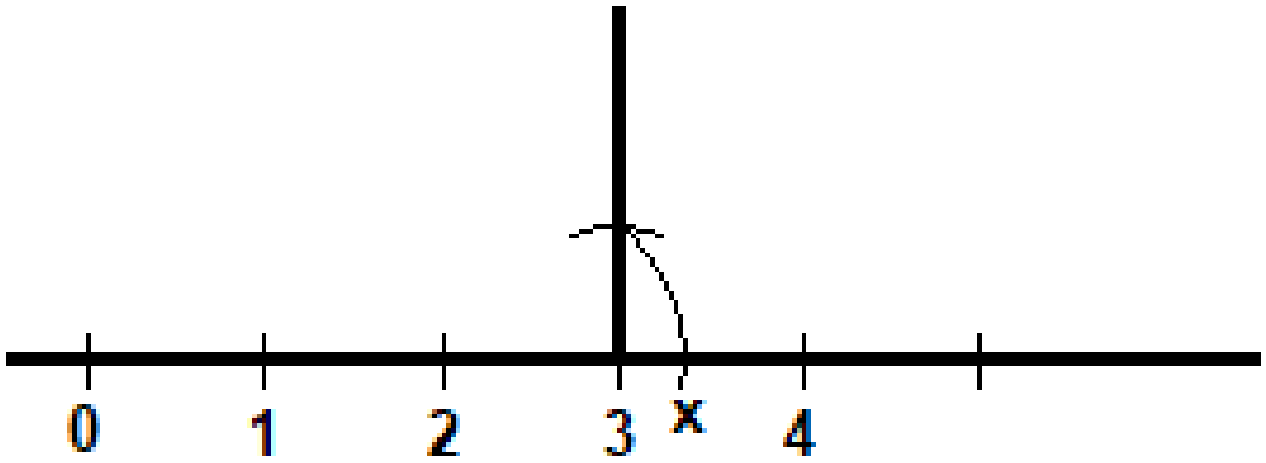
4) Find distance between (2, 3) and (2, –4).

5) Find distance of point (2, 2) from origin.

6) Find value of a and b if $\frac{\sqrt{3}+1}{\sqrt{3}-1} = a + b\sqrt{3}$

7) Find value of x and y if $\frac{\sqrt{5}-\sqrt{2}}{\sqrt{5}+\sqrt{2}} = 2x + y\sqrt{10}$

8) What is the value of x?



9) If $\sqrt{2} = 1.4142$, find the value of $\sqrt{\frac{\sqrt{2}-1}{\sqrt{2}+1}}$

10) Evaluate:

$$\frac{234\times234\times234+456\times456\times456}{234\times234-234\times456+456\times456}$$

11) $2022^2 - 2021^2 =$

12) If $a+b+c=0$, then $\frac{a^2}{bc}+\frac{b^2}{ca}+\frac{c^2}{ab}=$

13) Simplify: $\dfrac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}}+\dfrac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$

14) Simplify: $\frac{\sqrt{5}+\sqrt{2}}{\sqrt{5}-\sqrt{2}}-\frac{\sqrt{5}-\sqrt{2}}{\sqrt{5}+\sqrt{2}}$

15) If a + b = 4, ab = 2, find the value of $a^2 + b^2$

16) If a + b = 4, ab = 2, find the value of $a^3 + b^3$

17) Give three examples of scalar quantities.

18) A body travels from A to B at an average speed of 30 kmph and returns at an average speed of 40 kmph. Find average speed and average velocity of the whole journey.

19) A body starts from A and covers 4 km towards east. Then it turns left and covers 5 km. Thereafter it turns right and covers 6 km. Find distance and displacement of the body.

20) A body starts from point A and covers 2 km towards north, then 4 km towards east, then 5 km towards north, then 10 km towards west, 7 km towards south and then 6 km towards east. Find distance and displacement of the body.