



# MATHS

## BOOKS - NAVNEET PUBLICATION

### RATIONAL AND IRRATIONAL NUMBERS

#### Question Bank

1. Show the following numbers on a number line. Draw a separate number line for each

example :

$$\frac{3}{2}, \frac{5}{2}, -\frac{3}{2}$$



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2. Show the following numbers on a number line. Draw a separate number line for each

example :

$$\frac{7}{5}, \frac{-2}{5}, \frac{-4}{5}$$



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3. Show the following numbers on a number line. Draw a separate number line for each

example :  $\frac{-5}{8}$  ,  $\frac{11}{8}$



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4. Show the following numbers on a number line. Draw a separate number line for each

example :  $\frac{13}{10}$  ,  $\frac{-17}{10}$



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5. Observe the number line and answer the questions:



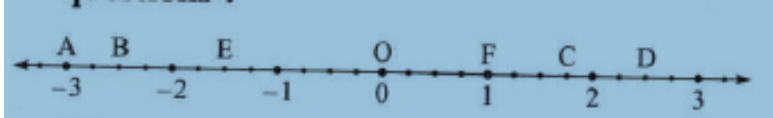
[Here, each unit distance is divided into 4 equal parts.]

Which number is indicated by point B ?



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6. Observe the number line and answer the questions:



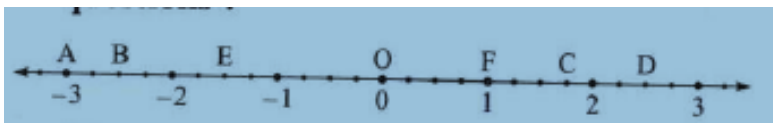
[Here, each unit distance is divided into 4 equal parts.]

Which point indicates the number  $1\frac{3}{4}$  ?



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7. Observe the number line and answer the questions:



[Here, each unit distance is divided into 4

equal parts.]

State, whether the statement 'the point D denotes the number  $\frac{5'}{2}$  is true or false.



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**8.** Compare the following numbers:

$-7, -2$



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**9.** Compare the following numbers:

$$0, \frac{-9}{5}$$



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**10.** Compare the following numbers:

$$\frac{8}{7}, 0$$



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**11.** Compare the following numbers:

$$\frac{-5}{4}, \frac{1}{4}$$



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**12.** Compare the following numbers:

$$\frac{40}{29}, \frac{141}{29}$$



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**13.** Compare the following numbers:

$$\frac{-17}{20}, \frac{-13}{20}$$



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**14.** Compare the following numbers:

$$\frac{15}{12}, \frac{7}{16}$$



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**15.** Compare the following numbers:

$$\frac{-25}{8}, \frac{-9}{4}$$



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**16.** Compare the following numbers:

$$\frac{12}{15}, \frac{3}{5}$$



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**17.** Compare the following numbers:

$$\frac{-7}{11}, \frac{-3}{4}$$



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**18.** Write the following rational numbers in decimal form :

$$\frac{9}{37}$$



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**19.** Write the following rational numbers in decimal form :

$$\frac{18}{42}$$



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**20.** Write the following rational numbers in decimal form :

$$\frac{9}{14}$$



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21. Write the following rational numbers in decimal form :

$$-\frac{103}{5}$$



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22. Write the following rational numbers in decimal form :

$$-\frac{11}{13}$$



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**23.** The number  $\sqrt{2}$  is shown on a number line. Steps are given to show  $\sqrt{3}$  on the number line using  $\sqrt{2}$ . Fill in the boxes properly and complete the activity.



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**24.** Show  $\sqrt{5}$  on a number line.



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



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**26.** Choose the correct alternative answer for each of the following questions:

Which of the following is a rational number ?

A.  $\sqrt{2}$

B. 0.3

C.  $\pi$

D.  $\sqrt{7}$

**Answer:**



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**27.** Choose the correct alternative answer for each of the following questions:

Which of the following is an irrational number ?



A.  $\sqrt{3^2 + 4^2}$

B.  $\sqrt{121}$

C.  $\sqrt{5}$

D. 3.14

**Answer:**



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**28.** Choose the correct alternative answer for each of the following questions:

Which of the following is a non-terminating recurring decimal form ?

A. 3.75

B. 0.4

C. 1.25

D. 0.010010001...

**Answer:**



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**29.** Choose the correct alternative answer for each of the following questions:

Which of the following is a natural number ?

A.  $2\frac{1}{3}$

B.  $-7$

C.  $-2\frac{1}{3}$

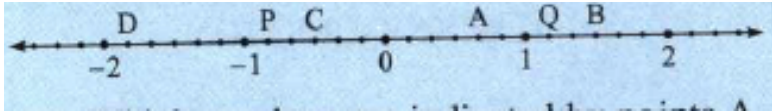
D.  $7$

**Answer:**



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**30.** Observe the number line and answer the questions:



Which numbers are indicated by points A and D?



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**31.** Observe the number line and answer the questions:



Which numbers are indicated by points P and Q?



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**32.** Compare the following numbers:

$$\frac{7}{9}, \frac{11}{13}$$



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**33.** Compare the following numbers:

$$\frac{-9}{13}, \frac{-5}{9}$$



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**34.** Compare the following numbers:

$$\frac{25}{16}, \frac{71}{48}$$



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**35.** Compare the following numbers:

$$\frac{4}{7}, \frac{16}{28}$$



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**36.** Show the following numbers on a number line. Draw a separate number line for each example:

$$\frac{2}{3}, -\frac{5}{3}, \frac{5}{3}.$$



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**37.** Show the following numbers on a number line. Draw a separate number line for each example:

$$\frac{1}{6}, -\frac{7}{6}, \frac{11}{6}.$$



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**38.** Classify the following decimal fractions as terminating and non-terminating recurring decimals:

0.777



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**39.** Classify the following decimal fractions as terminating and non-terminating recurring



decimals:

0.777...



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**40.** Classify the following decimal fractions as terminating and non-terminating recurring decimals:

9.  $\overline{165}$



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**41.** Classify the following decimal fractions as terminating and non-terminating recurring decimals:

4.718



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**42.** Classify the following decimal fractions as terminating and non-terminating recurring decimals:

0.578





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**43.** Classify the following decimal fractions as terminating and non-terminating recurring decimals:

9.165165



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**44.** Classify the following decimal fractions as terminating and non-terminating recurring

decimals:

4.  $\overline{13}$



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**45.** Classify the following decimal fractions as terminating and non-terminating recurring decimals:

81.234...



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**46.** Write the following numbers in decimal form:

$$\frac{7}{4}$$



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**47.** Write the following numbers in decimal form:

$$\frac{-29}{5}$$



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**48.** Write the following numbers in decimal form:

$$\frac{35}{8}$$



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**49.** Write the following numbers in decimal form:

$$\frac{2}{11}$$



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50. Write the following rational numbers in decimal form :

$$\frac{9}{13}$$



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51. Write the following rational numbers in decimal form :

$$-(15)/7$$



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**52.** Find three rational number that lie between

$-(5)/3$  and  $7/8$



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**53.** Find three rational number that lie between

$\frac{5}{7}$  and  $\frac{6}{7}$ . (OEQ)



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54. Show the number  $\sqrt{10}$  and  $\sqrt{17}$  on the same number line



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