EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Real Numbers

Grade : SSC Grade IX

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1. Which of the following is a mixed recurring decimal?

   (i) 20.23809523809523... (ii) 11.27777777777777... (iii) 20.90476190476190... (iv) 29.55555555555555...

   (v) 6.22222222222222...

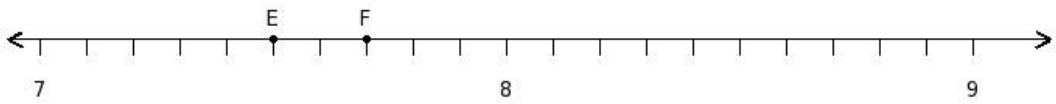
2. The decimal number 636.25 lies between

   (i) {638,639} (ii) {637,638} (iii) {636,637} (iv) {634,635} (v) {635,636}

3. Convert the fraction $\frac{355}{18}$ to non-terminating recurring decimal

   (i) $19.7\overline{2}$ (ii) $0.197\overline{2}$ (iii) $197.\overline{2}$ (iv) $1972.\overline{2}$ (v) $1.97\overline{2}$

4. Find the difference of the rational numbers at the points labelled with letters E and F



   (i) $(\frac{-1}{3})$ (ii) $(\frac{-3}{5})$ (iii) $\frac{1}{5}$ (iv) $(\frac{-1}{7})$ (v) $(\frac{-1}{5})$

5. $\sqrt{9} \div (-2\sqrt{2}) =$

   (i) $(-\frac{3}{4}\sqrt{2})$ (ii) $(-\frac{3}{4}\sqrt[4]{2})$ (iii) $(-\frac{3}{2})$ (iv) $(-\frac{3}{4}\sqrt{5})$ (v) $(-\frac{3}{4}\sqrt{\frac{1}{2}})$

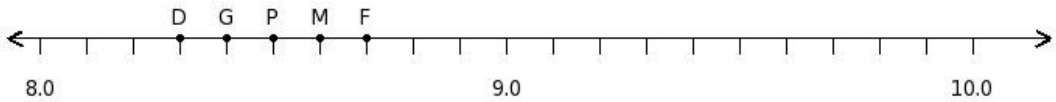
6. If $\sqrt{9216} = 96$, find the value of $\sqrt{92160000}$

   (i) 96000 (ii) 9598 (iii) 9600 (iv) 960 (v) 9602

7. Express $\frac{56}{33}$ as a decimal correct to 3 decimal places

   (i) 1.697 (ii) 1.597 (iii) 1.897 (iv) 1.797 (v) 1.497

8. Find the position of the decimal number 8.6 on the number line

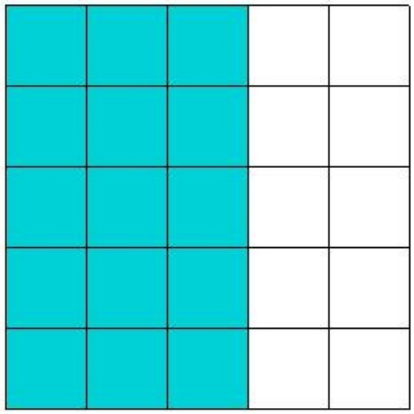


   (i) M (ii) G (iii) D (iv) F (v) P

9. Simplify $\frac{2^2 \times (-3)^2}{2^{-2} \times (-2)^{-2}}$

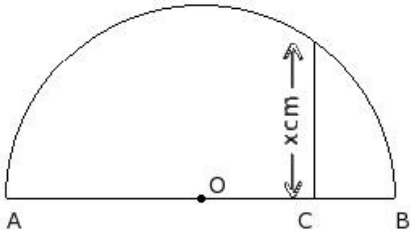
   (i) 24^2 (ii) 24^3 (iii) 27^2 (iv) 21^2 (v) 24

10. What fraction of the figure is shaded?



(i) $\frac{5}{9}$ (ii) $\frac{13}{25}$ (iii) $\frac{17}{25}$ (iv) $\frac{3}{5}$ (v) $\frac{15}{23}$

11. If the length of AB = 4.8 cm and CB = 1 cm, find the value of x



(i) $\sqrt{3.6}$ cm (ii) $\sqrt{4.2}$ cm (iii) $\sqrt{3.8}$ cm (iv) $\sqrt{3.4}$ cm (v) $\sqrt{4.3}$ cm

12. Simplify the expression $5^{\left(\frac{9}{5}\right)} \times 7^{\left(\frac{9}{5}\right)}$

(i) $35^{\left(\frac{9}{7}\right)}$ (ii) $35^{\left(\frac{9}{5}\right)}$ (iii) $37^{\left(\frac{9}{5}\right)}$ (iv) 35^{3} (v) $33^{\left(\frac{9}{5}\right)}$

13. $(-3\sqrt[3]{3}+3\sqrt[3]{8}+7\sqrt[3]{4})-(8\sqrt[3]{2}-\sqrt[3]{3}+4\sqrt[3]{7})=$

(i) $(-2\sqrt[3]{3}+3\sqrt[3]{8}+7\sqrt[3]{4}-8\sqrt[3]{2}-4\sqrt[3]{7})$ (ii) $(-2\sqrt[3]{3}+3\sqrt[3]{8}+7\sqrt[5]{4}-8\sqrt[3]{2}-4\sqrt[3]{7})$

(iii) $(-2\sqrt[3]{3}+3\sqrt[5]{8}+7\sqrt[3]{4}-8\sqrt[3]{2}-4\sqrt[3]{7})$ (iv) $(-2\sqrt[3]{3}+3\sqrt[3]{8}+7\sqrt[3]{4}-8\sqrt[3]{5}-4\sqrt[3]{7})$

(v) $(-2\sqrt[3]{\frac{1}{3}}+3\sqrt[3]{8}+7\sqrt[3]{4}-8\sqrt[3]{2}-4\sqrt[3]{7})$

14. Simplify the expression $\left(\frac{-4}{3}\right)^{-2} \times \left(\frac{-4}{3}\right)^{(-2/7)} \times \left(\frac{-4}{3}\right)^{(-3/5)}$

(i) $\left(\frac{-4}{3}\right)^{(-105/37)}$ (ii) $\left(\frac{-2}{3}\right)^{(-101/35)}$ (iii) $\left(\frac{-4}{3}\right)^{(-97/33)}$ (iv) $\left(\frac{-4}{3}\right)^{(-101/35)}$ (v) $(-2)^{\left(\frac{-101}{35}\right)}$

15. $(-\sqrt{6})+(-9\sqrt{6})=$

(i) $(-10\sqrt{6})$ (ii) $(-10\sqrt{3})$ (iii) $(-10\sqrt{8})$ (iv) $(-10\sqrt[4]{6})$ (v) (-60)

16. $\left[6^{\left(\frac{-5}{2}\right)}\right]^{-4/3}=$

(i) $6^{\left(\frac{16}{5}\right)}$ (ii) $4^{\left(\frac{10}{3}\right)}$ (iii) $9^{\left(\frac{10}{3}\right)}$ (iv) $6^{\left(\frac{10}{3}\right)}$ (v) 6^4

17. Simplify the expression $\left(\frac{7}{3}\right)^{-3}\times\left(\frac{7}{3}\right)^{-3}\times\left(\frac{8}{7}\right)^{-3}$

(i) $\left(\frac{56}{9}\right)^{-4}$ (ii) $\left(\frac{56}{9}\right)^{-3}$ (iii) $\left(\frac{58}{9}\right)^{-3}$ (iv) 6^{-3} (v) $\left(\frac{56}{9}\right)^{-2}$

18. $\frac{\sqrt[4]{18}}{\sqrt[4]{14}}=$

(i) $\sqrt[4]{\frac{11}{7}}$ (ii) $\sqrt{\frac{9}{7}}$ (iii) 1 (iv) $\sqrt[6]{\frac{9}{7}}$ (v) $\sqrt[4]{\frac{9}{7}}$

19. $(4\sqrt[3]{5}+6\sqrt[3]{8}-3\sqrt[3]{3})+(4\sqrt[3]{5}-6\sqrt[3]{2}-8\sqrt[3]{8})=$

(i) $(8\sqrt[3]{5}-3-3\sqrt[3]{3}-6\sqrt[3]{2})$ (ii) $(8\sqrt[3]{2}-4-3\sqrt[3]{3}-6\sqrt[3]{2})$ (iii) $(8\sqrt[3]{5}-4-3\sqrt[3]{3}-6\sqrt[3]{2})$ (iv) $(8\sqrt[3]{5}-4-3\sqrt[5]{3}-6\sqrt[3]{2})$

(v) $(8\sqrt[3]{5}-4-3\sqrt[3]{3}-6\sqrt[3]{5})$

20. If $\sqrt{2}=1.4142$, $\sqrt{3}=1.7321$, $\sqrt{5}=2.2361$, $\sqrt{7}=2.6458$,

the value of $(9\sqrt{168}+17\sqrt{729})=$

(i) 574.653 (ii) 575.653 (iii) 577.653 (iv) 576.653 (v) 573.653

21. The rationalising factor of $(10\sqrt{2}+2\sqrt{4})=$

(i) $(10\sqrt{2}-4)$ (ii) $(10\sqrt{5}-4)$ (iii) $(10\sqrt{-1}-4)$ (iv) $(10\sqrt{2}-5)$ (v) $(10\sqrt{2}-3)$

22. Which of the following is true?

(i) $\frac{38}{17}>\frac{37}{13}$ (ii) $\frac{13}{6}<\frac{21}{11}$ (iii) $\frac{34}{7}>\frac{33}{17}$ (iv) $\frac{13}{10}>\frac{32}{17}$ (v) $\frac{26}{25}>\frac{23}{2}$

23. $\dfrac{2\sqrt{20}}{2\sqrt{12}} =$

(i) $\sqrt[4]{\dfrac{5}{3}}$ (ii) $\dfrac{5}{3}$ (iii) $\sqrt{\dfrac{7}{3}}$ (iv) $\sqrt{\dfrac{5}{3}}$ (v) 1

24. Simplify the expression $\left(\dfrac{8}{7}\right)^9 \times \left(\dfrac{6}{5}\right)^9 \times \left(\dfrac{3}{2}\right)^9$

(i) 2^9 (ii) $\left(\dfrac{72}{35}\right)^8$ (iii) $\left(\dfrac{74}{35}\right)^9$ (iv) $\left(\dfrac{72}{35}\right)^9$ (v) $\left(\dfrac{72}{35}\right)^{10}$

25. The rationalising factor of $9\sqrt{89} =$

(i) $\sqrt{86}$ (ii) 89 (iii) $\sqrt[4]{89}$ (iv) $\sqrt{92}$ (v) $\sqrt{89}$

Assignment Key

1) (ii)	2) (iii)	3) (i)	4) (v)	5) (i)	6) (iii)
7) (i)	8) (i)	9) (i)	10) (iv)	11) (iii)	12) (ii)
13) (i)	14) (iv)	15) (i)	16) (iv)	17) (ii)	18) (v)
19) (iii)	20) (ii)	21) (i)	22) (iii)	23) (iv)	24) (iv)
25) (v)					

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