



RAMAGYA SCHOOL, NOIDA
MATHS. OLYMPIAD WORKSHEET, FRACTIONS
CLASS VII (2017-18)

(CONCEPT)

1. $\frac{2}{5} \times 5\frac{1}{5}$ is equal to
 a. $\frac{26}{25}$ b. $\frac{52}{25}$ c. $\frac{2}{5}$ d. 6
2. $3\frac{3}{4} \div \frac{3}{4}$ is equal to
 a. 3 b. 4 c. 5 d. $\frac{45}{16}$
3. A ribbon of length $5\frac{1}{4}$ m is cut into small pieces each of length $\frac{3}{4}$ m. Number of pieces will be
 a. 5 b. 6 c. 7 d. 8
4. The ascending arrangement of $\frac{2}{3}, \frac{6}{7}, \frac{13}{21}$ is:
 a. $\frac{6}{7}, \frac{2}{3}, \frac{13}{21}$ b. $\frac{13}{21}, \frac{2}{3}, \frac{6}{7}$ c. $\frac{6}{7}, \frac{13}{21}, \frac{2}{3}$ d. $\frac{2}{3}, \frac{6}{7}, \frac{13}{21}$
5. The product of $\frac{11}{13}$ and 4 is
 a. $3\frac{5}{13}$ b. $5\frac{3}{13}$ c. $13\frac{3}{5}$ d. $13\frac{5}{3}$
6. A farmer has 100 animals out of which $\frac{5}{10}$ are dairy cows; $\frac{2}{10}$ of dairy cows are cattle. How many cattle he has?
 a. 70 b. 50 c. 60 d. 10
7. $\frac{11}{?}$ is a fraction that lies between $\frac{1}{5}$ and $\frac{1}{6}$. What is the missing whole number in the box?
 a. 30 b. 25 c. 62 d. 16
8. Find the value of $4\frac{4}{5} + 3\frac{5}{6} + 2\frac{8}{10}$.
 a. $\frac{450}{15}$ b. $\frac{339}{15}$ c. $\frac{280}{40}$ d. $\frac{380}{60}$

(APPLICATION)

9. The value of $3 - \frac{2}{1 + \frac{2}{2 - \frac{3}{5}}}$ is?
 a. $\frac{37}{17}$ b. $\frac{38}{17}$ c. $\frac{37}{7}$ d. $\frac{28}{17}$
10. The product of the 7 fractions $(1 - \frac{1}{2})(1 - \frac{1}{3})(1 - \frac{1}{4})(1 - \frac{1}{5})(1 - \frac{1}{6})(1 - \frac{1}{7})(1 - \frac{1}{8}) =$

a. $\frac{1}{8}$ b. $\frac{1}{4}$ c. $\frac{1}{6}$ d. $\frac{1}{2}$

11. A jar is $\frac{3}{5}$ full of orange juice. This amount is equal to 6 full glasses. When 1 full glass is drunk, what fraction of the jar is still left with orange juice?

a. $\frac{2}{5}$ b. $\frac{1}{6}$ c. $\frac{1}{10}$ d. $\frac{1}{2}$

12. A bowler took 9 wickets for 725 runs, and then his average score per wicket is _

a. 80.56 b. 70.86 c. 7.56 d. 8.56

13. Montu studies for $3\frac{2}{8}$ hours daily. He devotes $2\frac{2}{8}$ hours of his time for math's and science. How much time does he devote for other subjects?

a. $\frac{6}{3}$ hours b. $\frac{1}{2}$ hours c. 1 hour d. $1\frac{1}{2}$ hours

14. Express the value of $9\frac{1}{3} - 5\frac{3}{4}$ in its simplest form.

a. $6\frac{2}{5}$ b. $5\frac{4}{7}$ c. $3\frac{7}{12}$ d. $9\frac{1}{12}$

15. If $-8/5 = a/10 = 20/b = -45/c$, Find the value of a, b and c respectively.

- A .10,-18,26
- b. -16,12.5,28.1
- c. 25,-36,-45
- d. 28,12,39

(VALUE BASED)

16. Health :the direction for pain reliever recommend that an adult of 60 kg and above take 4 tablet every 4 hour as needed and an adult who weighs between 40kg and 50kg can take $2\frac{1}{2}$ tablets every 4 hours as needed. Every tablet weighs $\frac{4}{25}$ grams. If 72 kg adult takes 4 tablets, how many grams of pain reliever he is gaining?

a. $\frac{16}{25}$ grams b. $\frac{32}{25}$ grams c. $\frac{8}{25}$ grams d. $\frac{11}{25}$ grams

17. Following shape is made of several small cubes. What fractions of cubes are not visible in the picture?



a. $\frac{27}{34}$ b. $\frac{17}{54}$ c. $\frac{13}{50}$ d. $\frac{23}{60}$

(HOTS)

18. There are two teams of two people each competing in a relay race. The race is for 1km, and each member of a team has to run 500 meters. Usha and Akshiti are in one team, and the Alisha twins form the second team. Usha can run 500 meters in $2\frac{1}{10}$ minutes. Akshiti can run 500 meters in $3\frac{1}{20}$ minute. Each of the Alisha twins can run 500 meters in $2\frac{1}{2}$ minutes.

Which pair wins the race and by how much time?

- a.** Usha and Akshiti win the race by 9 seconds **b.** Usha and Akshiti win the race by seconds
c. Alisha twins win the race by 5 seconds **d.** Alisha twins win the race by 9 seconds

19. Multiply the sum of 4 and $3\frac{2}{3}$ to the difference of $3\frac{2}{3}$ from 2.

- a.** $\frac{-113}{9}$ **b.** $\frac{-114}{9}$ **c.** $\frac{-115}{9}$ **d.** $\frac{-116}{9}$

20. Diameter of Earth is 12756000m. In 1996, a new planet was discovered whose diameter is $\frac{5}{86}$ of the diameter of Earth. Find the diameter of this planet in km.

- a.** 741.62 km **b.** 471.26 km **c.** 762.87km **d.** 744.55km