

Exercise 1

- Q1. A stack of boards is 21 inches high. Each board is $1\frac{3}{4}$ inches thick. How many boards are there?
- Q2. A satellite makes 4 revolutions of the earth in one day. How many revolutions would it make in $6\frac{1}{2}$ days?
- Q3. A bolt has $16\frac{1}{2}$ turns per inch. How many turns would be in $2\frac{1}{2}$ inches of threads?
- Q4. If a bookshelf is 20 inches long, how many $3\frac{1}{3}$ inch thick books will it hold?
- Q5. Deborah needs to make 16 costumes for the school play. Each costume requires $4\frac{1}{2}$ yards of material. How many yards of material will she need?
- Q6. The Coffee Pub has cans of coffee that weigh $4\frac{1}{3}$ pounds each. The Pub has $8\frac{1}{2}$ cans of coffee left. What is the total weight of $8\frac{1}{2}$ cans?
- Q7. Belinda baked 9 pies that weigh $4\frac{1}{20}$ pounds total. How much does each pie weigh?
- Q8. A piece of paper is $\frac{4}{1000}$ inches thick. How many sheets of paper will it take to make a stack 1 inch high?
- Q9. Tanya has read $\frac{3}{4}$ of a book, which is 390 pages. How many pages are in the entire book?
- Q10. DJ Gabe is going to serve $\frac{1}{3}$ of a whole pizza to each guest at his party. If he expects 24 guests, how many pizzas will he need?
- Q11. $\frac{2}{9}$ of the people on a restaurant are adults. If there are 95 more children than adults, how many children are there in the restaurant?
- Q12. Gary and Henry brought an equal amount of money for shopping. Gary spent \$95 and Henry spent \$350. After that Henry had $\frac{4}{7}$ of what Gary had left. How much money did Gary have left after shopping?
- Q13. $\frac{1}{9}$ of the shirts sold at Peter's shop are striped. $\frac{5}{8}$ of the remainder are printed. The rest of the shirts are plain colored shirts. If Peter's shop has 81 plain colored shirts, how many more printed shirts than plain colored shirts does the shop have?
- Q14. In an auditorium, $\frac{1}{6}$ of the students are fifth graders $\frac{1}{3}$ are fourth graders, and $\frac{1}{4}$ of the remaining students are second graders. If there are 96 students in the auditorium, how many second graders are there?
- Q15. Jennifer had \$30 to spend on herself. She spent $\frac{1}{5}$ of the money on a sandwich, $\frac{1}{6}$ for a ticket to a museum, and $\frac{1}{2}$ of it on a book. How much money does Jennifer have left over?
- Q16. Mark drove for $\frac{1}{2}$ of the trip, and Justin drove for $\frac{1}{4}$ of the trip. Gina and Kaitlyn divided the rest of the driving evenly between them. If the entire trip was 128 miles, how many miles did Kaitlyn drive?
- Q17. Two pie pans of the same size remain on the counter. One pan has $\frac{1}{2}$ of a pie, and the other has $\frac{3}{4}$ of a pie left in it. Mom wishes to divide all the pie into pieces that are each $\frac{1}{8}$ of a pie. How many pieces of pie will she have when she is finished?
- Q18. A man spend $\frac{1}{4}$ of his income on shopping, $\frac{1}{3}$ on house rent, $\frac{1}{6}$ on personal expense, now he is left with 12000. What is the monthly salary of the man?
- Q19. One half of the people at the game wore the team colors. Two thirds of those people wore team hats as well. One fourth of those with team colors and team hats had banners to wave. Twenty five people had team colors and banners, but no hats. One hundred people had only banners. If there were 1824 people at the game, how many had banners?

- Q20. A cube shaped pool is $\frac{3}{4}$ full of water. If the water is 36 inches deep, how much would the water in the pool when it is filled to the brim?
- Q21. Mom mixed $2\frac{1}{2}$ pounds of apples, $1\frac{1}{8}$ pounds of grapes and $1\frac{1}{4}$ pounds of pears for a salad. After setting aside $1\frac{1}{2}$ pounds of salad for today, she divided the rest of the salad equally into 3 containers. What is the weight of the salad in one container?
- Q22. if $\frac{1}{3}$ of half of a number is equal to 39. What is the number?
- Q23. Debbie had $5\frac{1}{2}$ yards of ribbon. She cut it into pieces that were each $1\frac{1}{2}$ yard long. How many inches long is the leftover piece? Note that the fraction that indicates the leftover piece is a fraction of a piece, not a fraction of the original amount.
- Q24. Aaron alone can finish a piece of work in 12 days and Brandon alone can do it in 15 days. If both of them work at it together, how much time will they take to finish it?
- Q25. A and B together can do a piece of work in 15 days, while B alone can finish it 20 days. In how many days can A alone finish the work?
- Q26. A can do a piece of work in 25 days and B can finish it in 20 days. They work together for 5 days and then A leaves. In how many days will B finish the remaining work?
- Q27. A tap A can fill a cistern in 8 hours while tap B can fill it in 4 hours. In how much times will the cistern be filled if both A and B are opened together?
- Q28. A tap A can fill a cistern in 4 hours and the tap B can empty the full cistern in 6 hours. If both the taps are opened together in the empty cistern, in how much time will the cistern be filled up?
- Q29. A cistern can be filled by two taps A and B in 12 hours and 16 hours respectively. The full cistern can be emptied by a third tap C in 8 hours. If all the taps are turned on at the same time, in how much time will the empty cistern be filled completely?
- Q30. A cistern can be filled by one tap in 5 hours and by another in 4 hours. How long will it take to fill if both the taps are opened simultaneously?
- Q31. A can do a piece of work in 24 days while B can do it in 30 days. In how many days can they complete it, if they work together?
- Q32. A can do a piece of work in 15 hours while B can do it in 12 hours. How long will both take to do it, working together?
- Q33. A and B, working together can finish a piece of work in 6 days, while A alone can do it in 9 days. How much time will B alone take to finish it?
- Q34. Two motor mechanics, Ron and Sam, working together can overhaul a scooter in 6 hours. Ron alone can do the job in 15 hours. In how many hours, can Sam alone do it?
- Q35. A cistern has two inlets A and B which can fill it in 12 minutes and 15 minutes respectively. An outlet C can empty the full cistern in 10 minutes. If all the three pipes are opened together in the empty tank, how much time will they take to fill the tank completely?
- Q36. A pipe can fill a cistern in 9 hours. Due to a leak in its bottom, the cistern fills up in 10 hours. If the cistern is full, in how much time will it be emptied by the leak?
- Q37. Convert each of the following as fractions as percent:
- (i) $\frac{7}{25}$ (ii) $\frac{3}{10}$ (iii) $3\frac{2}{5}$ (iv) $2\frac{1}{125}$ (v) $\frac{3}{4}$ (vi) $\frac{53}{100}$
- (vii) $\frac{1}{5}$ (viii) $\frac{7}{20}$
- Q38. Express the following fractions into percentage:
- (i) $\frac{2}{5}$ (ii) $\frac{3}{8}$ (iii) $\frac{3}{200}$ (iv) $\frac{1}{20}$ (v) $\frac{5}{6}$ (vi) $\frac{65}{80}$

- Q39. Out of a salary of \$4500, I kept $\frac{1}{3}$ as savings. Out of the remaining money, I spend 50% on food and 20% on house rent. How much do I spend on food and house rent?
- Q40. A certain school has 120 teachers. If this constitutes 30% of its workforce, find the number of employees in the school.
- Q41. Rachael gets 94 marks in her exam. These are 47% of the total marks. Find the maximum number of marks.
- Q42. A tank can hold 50 liters of water. At present, it is only 30% full. How many liters of water shall I put in the tank, so that it is 50% full?
- Q43. Pat's income is 20% more than Adam. How much percent is Adam's income less than Pat's?
- Q44. If the price of petrol increases by 25% and Raj intends to spend only an additional 15% on petrol, by how much% will he reduce the quantity of petrol purchased?
- Q45. If a number exceeds 34% of itself by 132. What is the number?
- Q46. 30% of the men are more than 25 years old and 80% of the men are less than or equal to 50 years old. 20% of all men play football. If 20% of the men above the age of 50 play football, what percentage of the football players are less than or equal to 50 years?
- Q47. If the price of petrol increases by 25%, by how much must a user cut down his consumption so that his expenditure on petrol remains constant?
- Q48. For track practice, runners were supposed to walk or jog twenty laps. Sara jogged $\frac{3}{4}$ of the laps. Jacob jogged $\frac{3}{5}$ of the laps. Sierra jogged $\frac{1}{2}$ of the laps. List the runners in order from least to greatest number of laps jogged.
- Q49. A picture folder on Bridget's computer has 36 files in it. Pictures from her friends make up $\frac{1}{6}$ of the files. Another $\frac{2}{6}$ of the files are pictures from her sister. What fraction of the files is from Bridget's friends and sister?
- Q50. Two-thirds of Andrea's shirts are black. One-third of her shirts is black and have a band on them. What fraction of her shirts is black and do not have a band on them?
- Q51. Serena worked 18 hours last week for a landscaper. She worked $\frac{1}{3}$ of those hours planting flowers and $\frac{1}{2}$ of those hours mowing lawns. How many hours did Serena work planting flowers?
- Q52. Brenna took a picture of her friends and wants to enlarge it to make a poster. The original picture is 4 inches tall and 6 inches wide. If she makes a poster that is 20 inches tall and 30 inches wide, is it in proportion to the original?

Answer key

1	12	12	\$595	23	$\frac{2}{3}$	34	10 hours	45	200
2	26	13	54	24	$6\frac{2}{3}$ days	35	20 minutes	46	80%
3	$41\frac{1}{4}$	14	12	25	60 days	36	90 hours	47	20%
4	6	15	Rs. 4	26	11 days	37	Self	48	10, 12, 15
5	72	16	16 km	27	$2\frac{2}{3}$ hours	38	Self	49	$\frac{1}{2}$
6	$36\frac{5}{6}$	17	10	28	12 hours	39	\$2100	50	$\frac{1}{3}$
7	$\frac{9}{20}$	18	Rs. 48000	29	48 hours	40	400	51	6
8	250	19	277	30	$2\frac{2}{9}$ hours	41	200	52	Yes
9	520	20	48 inches	31	$13\frac{1}{3}$ days	42	10 litres		
10	8	21	$1\frac{1}{8}$	32	$6\frac{2}{3}$ hours	43	$16\frac{2}{3}\%$		
11	133	22	234	33	18 days	44	8%		

Exercise 2

Q1. Billy ate $1\frac{1}{4}$ pizzas and John ate $1\frac{2}{3}$ pizzas. How much more pizza did John eat than Billy? .

- (a) $\frac{2}{3}$ (b) $\frac{5}{12}$ (c) $\frac{1}{4}$ (d) $\frac{7}{12}$

Q2. Tina works 15 hours a week (Monday to Friday). Last week she worked $3\frac{1}{2}$ hours on Monday, 4 hours on Tuesday, $2\frac{1}{6}$ hours on Wednesday and $1\frac{1}{2}$ on Thursday. How many hours did she work on Friday?

- (a) 4 (b) $\frac{5}{6}$ (c) $3\frac{5}{6}$ (d) $2\frac{5}{6}$

Q3. Order from least to greatest the fractions $\frac{3}{5}$, $\frac{7}{6}$, $\frac{1}{3}$, $\frac{4}{9}$.

- (a) $\frac{1}{3}, \frac{4}{9}, \frac{3}{5}, \frac{7}{6}$ (b) $\frac{4}{9}, \frac{1}{3}, \frac{3}{5}, \frac{7}{6}$ (c) $\frac{1}{3}, \frac{4}{9}, \frac{7}{6}, \frac{3}{5}$ (d) $\frac{1}{3}, \frac{3}{5}, \frac{4}{9}, \frac{7}{6}$

Q4. In a class $\frac{3}{4}$ th of the students do not know either English or Hindi. But $\frac{1}{6}$ th of the students know English. How much students know both English and Hindi if students who know Hindi are $\frac{1}{8}$ th of total students in the class?

- (a) $\frac{1}{24}$ (b) $\frac{100}{24}$ (c) $\frac{10}{12}$ (d) $\frac{1}{4}$

Q5. Which of the following is in descending order?

- (a) $\frac{5}{8}, \frac{9}{13}, \frac{11}{17}$ (b) $\frac{5}{8}, \frac{11}{17}, \frac{9}{13}$ (c) $\frac{9}{13}, \frac{11}{17}, \frac{5}{8}$ (d) $\frac{11}{17}, \frac{9}{13}, \frac{5}{8}$

Q6. Since Raj was not paying attention in class, instead of multiplying M by $\frac{2}{7}$, he divided M by $\frac{2}{7}$. Raj's value was $1\frac{13}{14}$ more than expected value of M. What is M?

- (a) $\frac{3}{5}$ (b) $\frac{6}{7}$ (c) $\frac{3}{4}$ (d) $\frac{4}{3}$

Q7. Eiffel tower's $\frac{1}{5}$ th part is painted bronze. $\frac{1}{4}$ th of the remaining part is painted maroon. Rest of the Eiffel tower has golden color. If the height of this golden colored part is 450m, what is Eiffel towers' height?

- (a) 2250m (b) 1350m (c) 1000m (d) 750m

Q8. Which rational numbers lie between $\frac{1}{3}$ and $\frac{4}{5}$?

- (a) $\frac{21}{42}$ and $\frac{9}{50}$ (b) $\frac{693}{1000}$ and $\frac{22}{30}$ (c) $\frac{1}{6}$ and $\frac{5}{6}$ (d) $\frac{1}{2}$ and $\frac{1}{6}$

Q9. If a fraction's denominator is decreased by 80% and numerator is increased by 300%, the fraction becomes $\frac{2}{9}$. What is the fraction?

- (a) $\frac{8}{9}$ (b) $\frac{6}{45}$ (c) $\frac{1}{90}$ (d) $\frac{6}{72}$

Q10. A class eats $\frac{2}{5}$ of chocolates on 1st day. On the 2nd day they eat $\frac{3}{4}$ of the remainder. How many chocolates were there initially if still 75 chocolates are left?

- (a) 250 (b) 750 (c) 500 (d) 1000

Q11. Hiralal wants to build a tank. He employed 7 workers to do the work. It was expected to get completed in 12 days. 5 days after starting the work, 2 workers were fired by him. Remaining workers will take how much time to complete the work?

- (a) $\frac{49}{5}$ (b) $\frac{39}{7}$ (c) $\frac{25}{7}$ (d) $\frac{38}{5}$

Q12. James hired some workers to build his house in 20 days. But on the day of starting of the construction, 12 men did not come. Rest of the people then built the entire house in 32 days. How many workers had he initially hired?

- (a) 64 (b) 48 (c) 32 (d) 24

Q13. 54 toymakers can prepare 36 toys per day. Ajay wants 416 toys. How many toymakers should he employ to get the job done in 16 days?

- (a) 43 (b) 39 (c) 16 (d) 24

- Q14. The salaries of A and B taken together amount to Rs. 2000. A spends 95% of his salary and B, 85% of his. If now, their savings are the same, what is A's salary ?
(a) Rs. 750 (b) Rs. 1250 (c) Rs. 1500 (d) Rs. 1600
- Q15. How many digits will be there to the right of the decimal point in product of 95.75 and .02554?
(a) 5 (b) 6 (c) 7 (d) None of these
- Q16. If a quarter kg of onions costs 80 paise, how many paise will 100 gm cost?
(a) 32 paise (b) 44 paise (c) 56 paise (d) 63 paise
- Q17. If a carpenter completes $\frac{3}{8}$ th of his work in 6 days, then how many more days will he require completing his remaining work?
(a) 10 (b) 12 (c) 6 (d) 16
- Q18. If a cloth merchant sells 'a' metres of cloth for Rs.x, then what is the selling price of 'b' metres of cloth?
(a) Rs. (b*x) (b) Rs. $\{(b*x)/a\}$ (c) Rs. $\{(a*b)/x\}$ (d) None of these
- Q19. When Rs. 250 added to $\frac{1}{4}$ th of a given amount of money makes it smaller than $\frac{1}{3}$ rd of the given amount of money by Rs. 100. What is the given amount of money?
(a) Rs. 350 (b) Rs. 600 (c) Rs. 4200 (d) Rs. 3600
- Q20. Eight people are planning to share equally the cost of a rental car. If one person withdraws from the arrangement and the others share equally the entire cost of the car, then the share of each of the remaining persons increased by?
(a) $\frac{3}{2}$ (b) $\frac{7}{8}$ (c) $\frac{5}{7}$ (d) None of these
- Q21. 2 trees are there. One grows at $\frac{3}{5}$ of the other. In 4 years total growth of the trees is 8 ft. What growth will smaller tree have in 2 years?
(a) 1.2 (b) 1.3 (c) 1.5 (d) 2
- Q22. A man spends 35% of his income on food, 25% on children education and 80% of the remaining on house rent. What percent of his income he is left with ?
(a) 8% (b) 10% (c) 12% (d) 14%
- Q23. If $\frac{2}{15}$ of the people in a trade are from Rural area and rest are from Urban area. If number of urban people are 165 more than the rural people. Find the number of rural people in the trade?
(a) 30 (b) 135 (c) 150 (d) None of these
- Q24. An officer saves 25% of the salary. If his salary is increased by 20%, his saving is the same now. By what percent his expenditure increased?
(a) 20% (b) 21.05% (c) 25% (d) 30%
- Q25. A swimming pool is five-sixth full of water. If 2000 litres of water is poured into it, it is $\frac{9}{10}$ full now. What is the original quantity of the pool?
(a) 20000 litres (b) 250000 litres (c) data inadequate (d) None of these
- Q26. In a group discussion $\frac{1}{5}$ of the students are from Kerala, $\frac{2}{5}$ of the remaining from Tamilnadu, 75% of the remaining are from Delhi and rest are from Bihar. If the number of students from Bihar are 18, then how many students are from Tamilnadu?
(a) 30 (b) 24 (c) 48 (d) None of these
- Q27. In a village 35% people do government jobs, $\frac{1}{5}$ of the remaining are doing private job and rest are farmers. If no of govt. job employees in the village are 490. How many farmers are there in the village?
(a) 728 (b) 172 (c) 98 (d) None of these

- Q28. Ram sells his goods 20% cheaper than Bobby and 20% dearer than Chandilya. How much percent is Chandilya's goods cheaper/dearer than Bobby?
 (a) 33.33% (b) 50% (c) 42.85% (d) None of these
- Q29. Raman spends 30% of his salary on house rent 30% of the rest he spends on his children's education and 24% of the total he spends on clothes. After his expenditure he is left with Rs. 2500. What is Raman's salary?
 (a) Rs. 11,494.25 (b) Rs. 20,000 (c) Rs. 10,000 (d) Rs. 15,000
- Q30. The house wife goes to market to purchase articles. After spending Rs. 25 she is able to save Rs. 5. What part of money did she save?
 (a) $\frac{1}{4}$ (b) $\frac{1}{5}$ (c) $\frac{1}{6}$ (d) None of these
- Q31. A man distributes sweets equally among certain number of children in such a way that if number of children been half, each child would have receive 8 sweets. How many sweets are there in all
 (a) 8 (b) 16 (c) 64 (d) data inadequate
- Q32. After spending $\frac{1}{5}$ of $\frac{4}{5}$ of the salary on food articles a man able to save Rs. 16800. What is $\frac{13}{20}$ of the salary of man?
 (a)Rs. 13,000 (b) Rs. 15,000 (c) Rs. 16,000 (d) None of these
- Q33. A rope of 120 m is cut into two pieces. If the smaller part is $\frac{1}{5}$ of the other. What is the length of the longest part?
 (a) 24 m (b) 48 m (c) 96 m (d) 100 m
- Q34. A man purchases 20 litres at the rate of Rs. 20 per litre. Add some water into it, sold the mixture at cost at 12.5% above the cost price but gain 25% in the transaction. What quantity of water did he added?
 (a) 10% (b) $11\frac{1}{9}\%$ (c) $12\frac{1}{2}\%$ (d) None of these
- Q35. A fruit seller sells half of the quantity at 25% profit and remaining at 10% loss. What will be the overall profit or loss percent?
 (a) 7.5% gain (b) 7.5% loss (c) 5% gain (d) 15% gain
- Q36. A pizza needs to be divided into several par parts. One part is one-fourth of the whole pizza. Second part is one of the remainder, third one is one-fifth of the remainder and rest is the fourth part. If third one is weighing 125 gm. What is the wait of the fourth part?
 (a) 500gm (b) 250gm (c) 750gm (d) None of these

Answer key exercise-2

1	B	7	D	13	B	19	C	25	D	31	D
2	C	8	B	14	C	20	D	26	C	32	A
3	A	9	C	15	B	21	C	27	A	33	D
4	A	10	C	16	A	22	A	28	A	34	B
5	C	11	A	17	A	23	A	29	C	35	A
6	A	12	C	18	B	24	B	30	C	36	A