

1. Store A and B are selling the same Teddy Bears. Each Teddy Bear is sold at \$25. To promote sales, Store A first increases the price by 10%, and then gives a discount of 20%. Store B, instead, directly puts a discount of 10% on the original price. After both stores adjust their prices, at which store is the price of the Teddy Bear cheaper? What is the difference in the price per Teddy Bear between these two stores?

2. There is 20 grams of a 15% sugar solution. When 480 grams of 2% sugar solution is added to it, what is the sugar concentration of the mixture?

3. There is 300 g of 20% saltine solution. In order to obtain 40% saltine solution, how many grams of salt needs to be added into the solution?

4 . A water tank is filled with some water, and it is currently  $\frac{5}{6}$  full. If 200L of water is poured out of this tank, the tank will become 75% full. How many L of water can this water tank contain when it is 100% full?

5. A fruit shop sells 20% of its stock, and then purchases 660 kg of fruit. As a result, the current stock is one-sixth more than the shop's original stocks. What is the original stock in kg?

6. If 70 g of 5% saltine solution and 30 g of 30% saltine solution are mixed, what is the concentration in the mixed solution?

7. To dilute 50 g of 45% sugar solution into 30% sugar solution, how many grams of water needs to be added?

8. In the Year-end exam, Leo was tested for three subjects, Chinese, math and English. Leo's grade for Chinese is 25% lower than his grade for math. His grade for English is 20% more than his grade for Chinese. By what percentage is his grade for math is higher than his average grade for all three subjects? (The result should be rounded to a whole number. For example, 16.4%  $\approx$  16%)

9. There are some marbles in a box. 40% of the marbles are red. There are 12 more yellow marbles than red marbles in the box and the rest of the marbles are green. If there is a total of 132 red and yellow marbles, what is the percentage of the green marbles in the box?

10. There is 150 g of 48% sugar solution. To dilute it into 20% sugar solution, how many grams of water needs to be added?

11. A factory plans to produce a batch of components. The total quantity is fixed. In the first month, it produced 100 more than  $\frac{2}{5}$  of the total quantity. In the second month, it produced 70 more than  $\frac{3}{7}$  of the total quantity. The factory still needs to produce 430 components to reach the planned total quantity. What is the total quantity?

12. In the garden, there are a total of 70 pots of yellow and red flowers. Among them, the red flowers account for  $\frac{4}{7}$  of the total. Later, some more pots of red flowers were purchased, and now the red flowers account for  $\frac{5}{8}$  of the total. How many pots of red flowers were purchased later?

13. Four little monkeys are eating peaches. The first monkey eats  $\frac{1}{4}$  of the total amount eaten by the other three monkeys. The second monkey eats  $\frac{2}{5}$  of the total amount eaten by the other three monkeys. The third monkey eats  $\frac{3}{7}$  of the total amount eaten by the other three monkeys. The fourth monkey then eats all the remaining 60 peaches. How many peaches were eaten by the four monkeys in total?

14. A factory needs to produce a batch of clothes. In the first week,  $\frac{1}{5}$  of the total batch is produced. In the second week, 700 clothes are produced. As a result, there is still  $\frac{1}{10}$  of the total batch unfinished. How many clothes are there in this batch in total?

15. There are a total of 45 balls in the box, consisting of red and white balls. The red balls originally accounted for  $\frac{5}{9}$  of the total. Later, some more red balls were added, and now the red balls account for  $\frac{3}{5}$  of the total. How many red balls were added later?

16. Mr. Wang, Mr. Li, Mr. Zhao, and Mr. Yang are discussing their ages. Mr. Wang's age is half the sum of the ages of the other three, Mr. Li's age is  $\frac{1}{3}$  of the sum of the ages of the other three, and Mr. Zhao's age is  $\frac{1}{4}$  of the sum of the ages of the other three. Mr. Yang is 26 years old. How old is Mr. Wang?

17. There are several red balls in the box. When  $\frac{3}{7}$  of all the red balls are taken out, then 58 red balls are added into the box. Now the number of red balls is  $\frac{2}{5}$  more than the original quantity in the box. How many red balls were originally in the box?

18. Among the students participating in the Fangtian Summer Camp, the number of boys is 7 more than  $\frac{5}{12}$  of the total number of students, and the number of girls is 4 more than  $\frac{2}{5}$  of the total number of students. What is the total number of students participating in the Fangtian Summer Camp?

19. Four brothers went to buy a television. The eldest brother brought money equal to half of the combined money of the other three brothers. The second brother brought money equal to one-third of the combined money of the other three brothers. The third brother brought money equal to one-fourth of the total money of the other three brothers. The fourth brother brought \$91. How much money did the four brothers bring in total?

20. There are 120 workers in the first workshop at first.  $\frac{1}{8}$  of these workers are moved to the second workshop. Now the number of workers in the first workshop is more than  $\frac{6}{7}$  of the workers in the second workshop by 3. How many workers are there in the second workshop originally?

21. The number of boys and girls in the hall were in the ratio 3:5. After half of the girls left and 22 boys entered this hall, the ratio of boys to girls became 8:5. How many boys were there in the hall in the beginning?

22. If the cuboid's length, width and height are in the ratio 1:2:5, and the smallest area among the 6 faces of this cuboid is 8. What is the largest area among the 6 faces of this cuboid?

23. Tom and Linda own some money respectively, in the ratio 7:3. Linda then gives \$20 to Tom, and then they end up with the same amount of money. How much money do they have in total?

24. The stickers owned by Anna, Bella and Cindy were in the ratio 3:4:5. Cindy now gives 6 stickers to Anna and 4 stickers to Bella, and the stickers owned by Anna, Bella and Cindy are in the ratio 4:5:5. How many stickers did Cindy have initially?

25. There are 4 consecutive odd numbers, arranged from small to large. The ratio is 5:7 between the average of the first 3 numbers and the average of the last 3 numbers. What is the largest number among these 4 numbers?

26. The cards owned by Hilton and Sam are in the ratio 8:7. If Hilton gives 4 cards to Sam, the new ratio is 18:17 between Hilton and Sam. How many cards does Hilton have in the beginning?

27. The balls in box A and box B are in the ratio 4:3. Now 4 balls are added into box A, and the balls in box A and box B are in the new ratio 3:2. How many balls are there in box B?

28. 10 years ago, the age ratio between uncle and Sam was 4:1. This year, the age ratio between uncle and Sam is 17:8. How old is Sam this year?

29. Elaine baked a total of 40 large and small cakes in the ratio 7:1. She decorated them with cherries. The number of cherries used for each large cake and small cake was in the ratio 4:3. She used 235 cherries to decorate all the small cakes and 8 large cakes. (Other large cakes are left undecorated.) How many cherries did Elaine use for all the small cakes?

30. The candies owned by Sandy and Sue are in the ratio 9:5. If they each receive 13 more candies, the new ratio is 29:19 between the candies owned by Sandy and Sue. How many candies does Sandy have in the beginning?