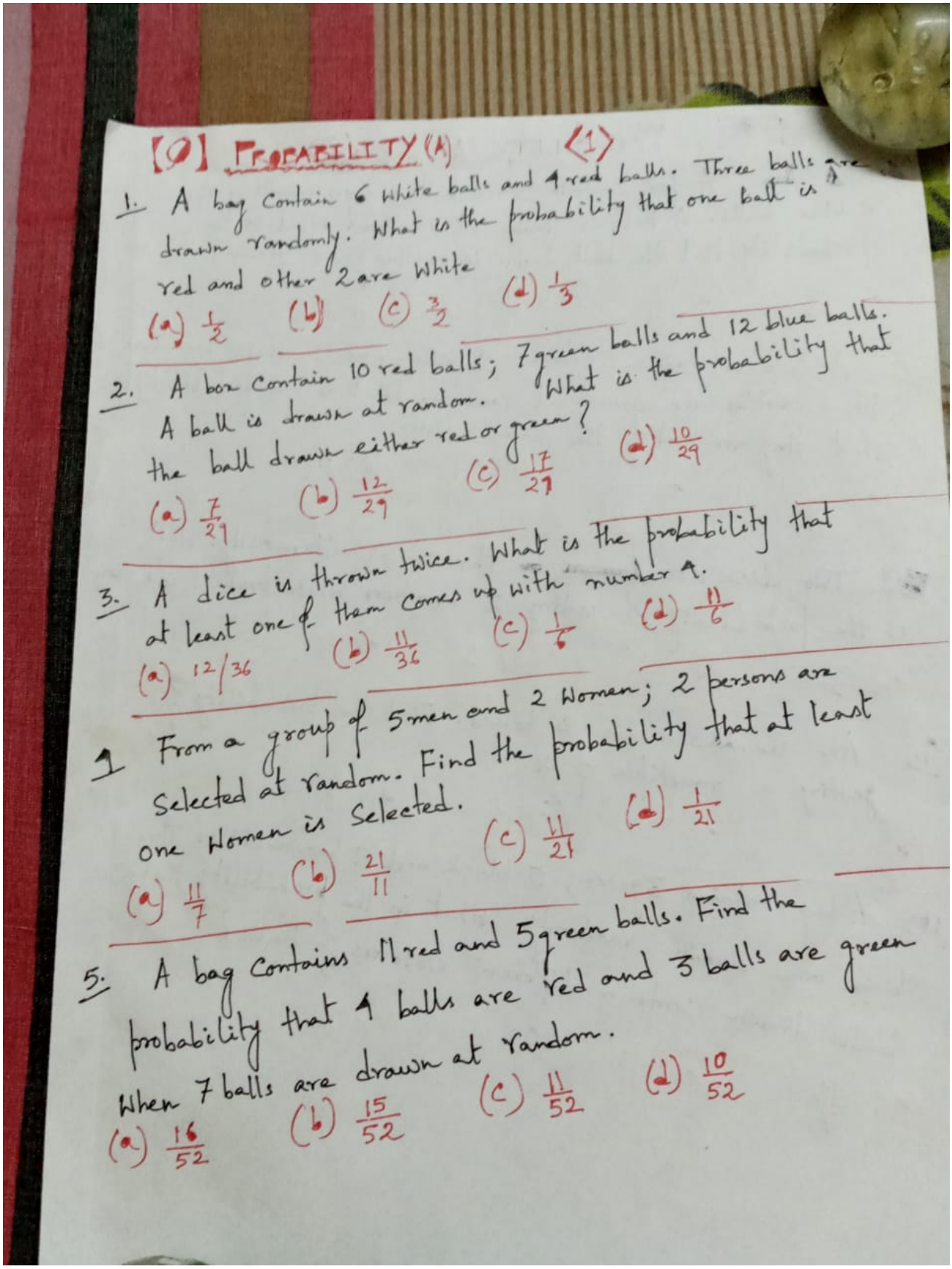
# PROBABILITY



[9] PROBABILITY (A) <1>

1. A bag contain 6 white balls and 4 red balls. Three balls are drawn randomly. What is the probability that one ball is red and other 2 are white

(a) $\frac{1}{2}$ (b) (c) $\frac{3}{2}$ (d) $\frac{1}{3}$

2. A box contain 10 red balls; 7 green balls and 12 blue balls. A ball is drawn at random. What is the probability that the ball drawn either red or green?

(a) $\frac{7}{29}$ (b) $\frac{12}{29}$ (c) $\frac{17}{27}$ (d) $\frac{10}{29}$

3. A dice is thrown twice. What is the probability that at least one of them comes up with number 4.

(a) 12/36 (b) $\frac{11}{36}$ (c) $\frac{1}{6}$ (d) $\frac{11}{6}$

4. From a group of 5 men and 2 women; 2 persons are selected at random. Find the probability that at least one Women is selected.

(a) $\frac{11}{7}$ (b) $\frac{21}{11}$ (c) $\frac{11}{21}$ (d) $\frac{1}{21}$

5. A bag contains 11 red and 5 green balls. Find the probability that 4 balls are red and 3 balls are green when 7 balls are drawn at random.

(a) $\frac{16}{52}$ (b) $\frac{15}{52}$ (c) $\frac{11}{52}$ (d) $\frac{10}{52}$

6. A box Contain 8 red balls; 6 green balls and 8 blue balls. A ball is drawn at random. What is the probability that the ball drawn is neither red nor green?

(a) $\frac{10}{29}$ (b) $\frac{2}{11}$ (c) $\frac{11}{9}$ (d) $\frac{4}{11}$

7. A box Contains 5 green, 4 yellow and 3 White marbles. Three marbles are drawn at random. What is the probability that they are not of the same Colour?

(a) $\frac{40}{44}$ (b) $\frac{44}{91}$ (c) $\frac{41}{44}$ (d) $\frac{40}{39}$

8. Two dice are thrown Simultaneously. What is the probability of getting 2 numbers whose product is even?

(a) $\frac{3}{4}$ (b) $\frac{4}{3}$ (c) $\frac{1}{4}$ (d) $\frac{1}{3}$

9. An unbiased die is tossed. Find the probability of getting a multiple of 2.

(a) 2 (b) 3 (c) $\frac{1}{2}$ (d) $\frac{1}{3}$

10. A bag Contains 3 green; 5 black and 4 brown balls. Three balls are drawn randomly. What is the probability that balls drawn Contain different Colours of balls?

(a) $\frac{11}{7}$ (b) $\frac{2}{11}$ (c) $\frac{11}{3}$ (d) $\frac{3}{11}$

11. A bag contain 2 red, 3 blue and 6 green plates. One plate is taken up randomly. What is the probability that it is neither red nor green?

(a) $\frac{3}{11}$ (b) $\frac{2}{11}$ (c) $\frac{7}{11}$ (d) $\frac{11}{3}$

12. A bag contains 4 pink dresses; 5 red dresses and 3 yellow dresses. Three dresses are drawn randomly. What is the probability that exactly one of them is pink?

(a) $\frac{65}{104}$ (b) $\frac{28}{55}$ (c) $\frac{5}{22}$ (d) $\frac{9}{7}$

13. A bag contain 2 red; 3 blue and 6 green plates. One plate is taken up randomly. What is the probability that it is either red or green?

(a) $\frac{8}{11}$ (b) $\frac{7}{10}$ (c) $\frac{3}{11}$ (d) $\frac{5}{7}$

14. In a box 4 blue pens; 3 red pens and 5 black pens. If 2 pens taken from the box; What is the probability that both of them are same colours pens?

(a) 66/19 (b) $\frac{15}{28}$ (c) $\frac{18}{35}$ (d) $\frac{19}{66}$

15. Out of a total 10 bulbs; 6 bulbs are working inorder. One has to choose 2 bulbs out of 6. What is the probability that all the 2 bulbs will be glowing?

(a) $\frac{1}{3}$ (b) $\frac{1}{2}$ (c) $\frac{1}{5}$ (d) $\frac{1}{6}$

16. A bag contains 4 black shirts; 3 yellow shirts and 5 red shirts; if 2 shirts are drawn randomly; what is the probability both of them are black?

(a) $\frac{12}{5}$ (b) 11 (c) $\frac{1}{12}$ (d) $\frac{1}{11}$

17. A bag contains 6 red balls and 7 white balls. Another bag contains 5 red balls and 3 white balls. One ball is selected from each. Find the probability that one ball is red and one is white?

(a) $\frac{53}{104}$ (b) $\frac{47}{104}$ (c) $\frac{63}{104}$ (d) $\frac{51}{104}$

18. A committee of 4 people is to be formed from 3 men; 2 women and 4 children. What is the probability that exactly two of chosen people are children?

(a) $\frac{13}{21}$ (b) $\frac{10}{31}$ (c) $\frac{5}{21}$ (d) $\frac{10}{21}$

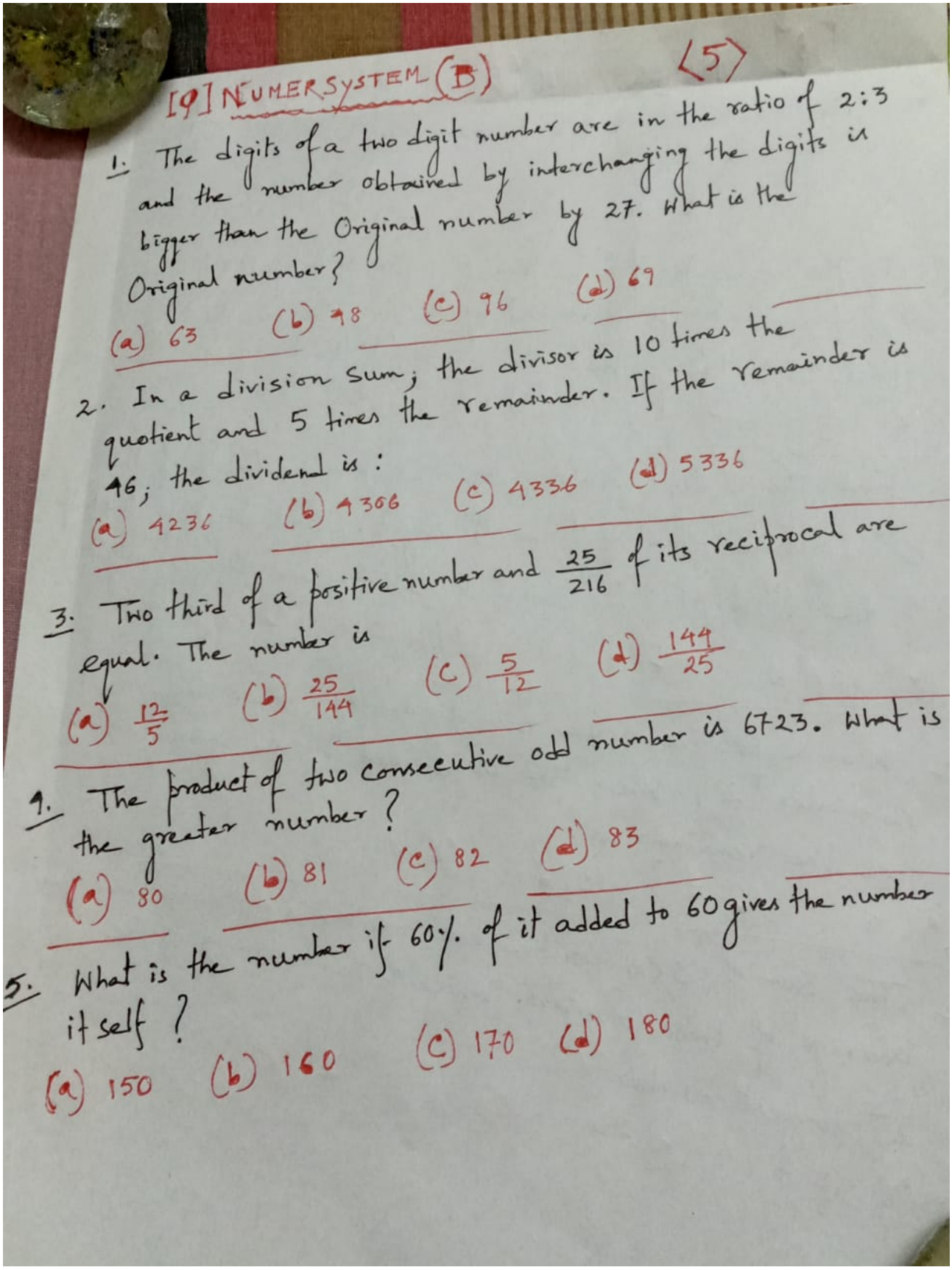
19. A box contains 10 electric bulbs from which 2 bulbs are defective. Two bulbs are chosen at random. What is the probability that one of them is defective?

(a) $\frac{3}{10}$ (b) $\frac{16}{45}$ (c) $\frac{25}{68}$ (d) $\frac{9}{19}$

20. Ther are 5 men and 3 women. A committee of 3 members is to be made. Find the probability that either there are 2 men and 1 women or 2 women and 1 man.

(a) $\frac{5}{51}$ (b) $\frac{45}{56}$ (c) $\frac{35}{51}$ (d) $\frac{18}{61}$

# NUMBER SYSTEM



[9] NUMBER SYSTEM (B) <5>

1. The digits of a two digit number are in the ratio of 2:3 and the number obtained by interchanging the digits is bigger than the Original number by 27. What is the Original number?

(a) 63 (b) 48 (c) 96 (d) 69

2. In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, the dividend is :

(a) 4236 (b) 4306 (c) 4336 (d) 5336

3. Two third of a positive number and $\frac{25}{216}$ of its reciprocal are equal. The number is

(a) $\frac{12}{5}$ (b) $\frac{25}{144}$ (c) $\frac{5}{12}$ (d) $\frac{144}{25}$

4. The product of two consecutive odd number is 6723. What is the greater number?

(a) 80 (b) 81 (c) 82 (d) 83

5. What is the number if 60% of it added to 60 gives the number it self?

(a) 150 (b) 160 (c) 170 (d) 180

6. The number is 0.01 is how many times as greater as the number $(0.0001)^2$

(a) $10^5$ (b) $10^6$ (c) $10^4$ (d) $10^3$

7. If the numerator of a fraction is increased by 100% and the denominator is increased by 200%. The resultant fraction is $1\frac{1}{15}$; what was Original fraction.

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

8. Find the 5 digit number; 5th digit is one fourth of the 3rd digit and One half of the 4th digit. 3rd digit is One half of the 1st digit. 2nd digit is 5 more than the 5th digit.

(a) 12786 (b) 86421 (c) 46218 (d) 24675

9. When a positive number n is divided by 7 leaves the remainder 2, When 3n is divided by the same number; then the remainder is.

(a) 4 (b) 5 (c) 6 (d) 8

10. The Sum of 3 consecutive even number is 40 more than the average of these numbers. Which of the following is the 2nd largest number?

(a) 18 (b) 20 (c) 22 (d) 24

## (8) NUMBER SYSTEM [B]

11. What will be the Unit digit of $27!$.

(a) 0 (b) 1 (c) 3 (d) 7

12. N is the Smallest number which when added to the 2000 makes the resulting number divisible by 12, 16, 18 and 21; Then the N is.

(a) 11 (b) 7 (c) 9 (d) 16

13. In the examination a Candidate must get $\frac{2}{5}^{th}$ marks to pass; out of total marks. Syam appeared in the exam and got 198 marks and still faild by 36 marks The maximum mark is.

(a) 560 (b) 610 (c) 650 (d) 585

14. Micael gets 3 marks for each Correct question and loses 2 marks for each Wrong answers. He attempts 30 Sum and obtain 30 marks. Find the no of question he answered Correctly.

(a) 18 (b) 12 (c) 23 (d) 20

15. If the number $10x47y$ is divisible by both 5 and 11; then the missing digits are respectively

(a) 1 and 5 (b) 6 and 0 (c) 5 and 0 (d) 2 and 5

16. The difference between two numbers is 2577. The quotient and remainder are respectively 26 and 2 When the larger number is divided by the smaller one. What is the largest number.

(a) 2599 (b) 2680 (c) 2851 (d) 2654

17. What is the number in the Unit place of the $(129)^{58}$ ?

(a) 1 (b) 2 (c) 4 (d) 9

18. Two different number are divided by the same divisor and left remainder 11 and 17 respectively and When their sum Was divided by the same divisor; the remainder Was 4. What is the divisor?

(a) 20 (b) 24 (c) 25 (d) 26

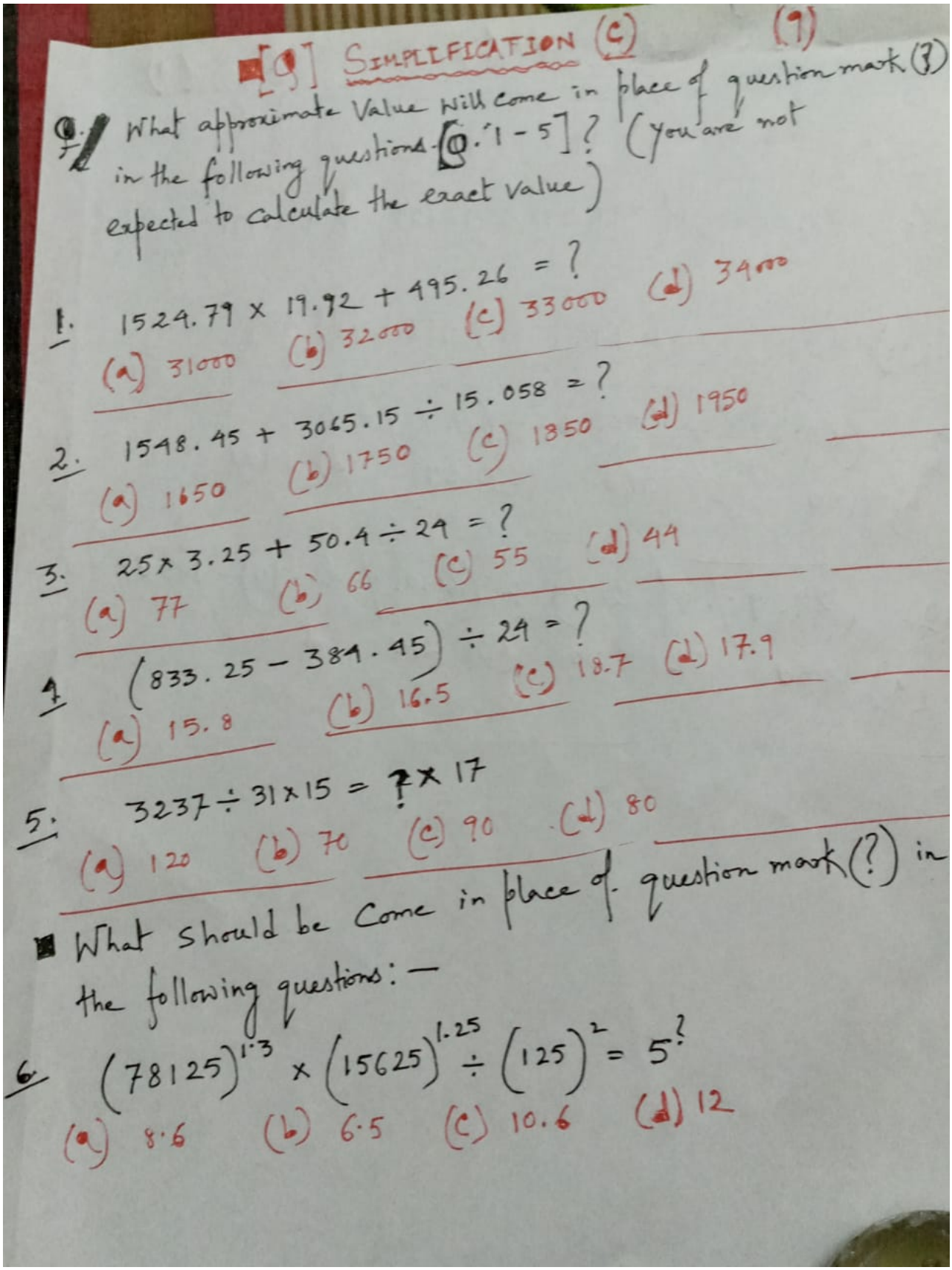
19. In a three digit number the digit in the Unit's place is twice the digit in the ten's place and 1.5 times the digit in the hundred's place. If the sum of all the three digits of the number is 13. What is the number?

(a) 356 (b) 456 (c) 436 (d) 626

20. A number a divided by 2, 3, 4, 5 or 6; remainder in each case is One. But the number is exactly divisible by 7. The number lies between 250 and 350, the sum of the digits of the number Will be

(a) 4 (b) 7 (c) 6 (d) 10

# SIMPLIFICATION



[9] SIMPLIFICATION (C) (9)

Q. What approximate Value will come in place of question mark (?) in the following questions [Q. 1 - 5]? (You are not expected to calculate the exact value)

1. $1524.79 \times 19.92 + 495.26 = ?$
(a) 31000 (b) 32000 (c) 33000 (d) 34000

2. $1548.45 + 3065.15 \div 15.058 = ?$
(a) 1650 (b) 1750 (c) 1850 (d) 1950

3. $25 \times 3.25 + 50.4 \div 24 = ?$
(a) 77 (b) 66 (c) 55 (d) 44

4. $(833.25 - 384.45) \div 24 = ?$
(a) 15.8 (b) 16.5 (c) 18.7 (d) 17.9

5. $3237 \div 31 \times 15 = ? \times 17$
(a) 120 (b) 70 (c) 90 (d) 80

■ What should be come in place of question mark (?) in the following questions: —

6. $(78125)^{1.3} \times (15625)^{1.25} \div (125)^2 = 5^?$
(a) 8.6 (b) 6.5 (c) 10.6 (d) 12

## [9] SIMPLIFICATION (C)

7. $\sqrt{7580} \times \sqrt{1325} \div \sqrt{665} - \sqrt{6395} = ?$

(a) 34 (b) 41 (c) 53 (d) 60

8. $79.008\%$ of $799.998 + 42.99\%$ of $499.999 - 53.93\%$ of $699.92 = ?$

(a) 459 (b) 445 (c) 456 (d) 469

9. $(63.83)^2 + (56.96)^2 - (77.81)^2 = ?$

(a) 1150 (b) 1260 (c) 1340 (d) 1450

10. $(29.9\%$ of $260) \div (60.01\%$ of $510) - 103.87 = ?$

(a) 450 (b) 320 (c) 210 (d) 280