Abhay 2025 – DPP #1

1. The present age of father is three years more than three times the age of his son. Three years later hence the father's age will be 10 years more than twice the age of the son. Determine their present ages. **[CBSE Board 2020]** Answer: Father - 33 years, Son - 10 years

2. Find c if the system of equation $cx + 3y + (3 - c) = 0$; $12x + cy - c = 0$ has infinitely many solutions? **[CBSE Board 2019]** Answer: c = 6

3. Seven time a two digit number is equal to four times the number obtained by reversing the order of its digits. If the difference of the digits is 3 determine the number. **[CBSE Question 2017]** Answer: 36

4. Raghav scored 70 marks in a test, getting 4 marks for each right answer and losing 1 mark for each wrong answer. Had 5 marks been awarded for each correct answer and 2 marks been deducted for each wrong answer, then Raghav would have scored 80 marks. How many questions were there in the test? **[Board Board 2015]** Answer: 30 questions

5. If $49x+51y= 499$, $51 x+49 y= 501$, then find the value of x and y **(CBSE Sample Paper 2022-23)**
Answer: $x = 11/2$, $y = 9/2$

6. A train covered a certain distance at a uniform speed. If the train would have been 6 km/h faster, it would have taken 4 hours less than the scheduled time. And, if the train were slower by 6 km/hr; it would have taken 6 hours more than the scheduled time. Find the length of the journey. **(CBSE Sample Paper 2022-23)** Answer: 720 km

7. Places A and B are 100 km apart on a highway. One car starts from A and another from B at the same time. If the cars travel in the same direction at different speeds, they meet in 5 hours. If they travel towards each other, they meet in 1 hour. What are the speeds of the two cars? **(CBSE Sample Paper 2022-23)**
Answer: Speed of Car from A - 60 km/hr, Car from B - 40 km/hr

8. Given a linear equation $3x – 5y = 11$. Form another linear equation in these variables such that the geometric representation of the pair of formed is: (a) Intersecting lines (b) Coincident lines (c) Parallel lines**. [CBSE Board 2015]** Answer: Answer can vary so understand concept

9. In the figure, ABCDE is a pentagon with BE || CD and BC || DE. BC is perpendicular to CD. AE = AB =5 cm, BE = 7 cm, BC = x – y and CD = x + y. If the perimeter of ABCDE is 27 cm. Find the value of x and y, given $x, y \neq 0$**. [CBSE Question 2020]** Answer: x = 6, y = 1

10. The owner of a taxi company decides to run all the taxi on CNG fuels instead of petrol/diesel. The taxi charges in city comprises of fixed charges together with the charge for the distance covered. For a journey of 13 km, the charge paid is Rs 129 and for journey of 22 km, the charge paid is Rs 210. (a) What will a person has to pay for

travelling a distance of 32 km? (b) Why did he decide to use CNG for his taxi as a fuel? **[CBSE Board 2014]** Answer: (a) Rs 300

11. A number consists of two digits. When the number is divided by the sum of its digits, the quotient is 7. If 27 is subtracted from the number, the digits interchange their places, find the number. **[CBSE Board 2010]** Answer: 63

12. Solve the following pair of linear equations graphically. $x + 3y = 6$; $2x - 3y = 12$ Also find the area of the triangle formed by the lines representing the given equations with y-axis. **[CBSE Board 2012]** Answer: Area = 18 sq units

[Aim 100/100 in Maths]