

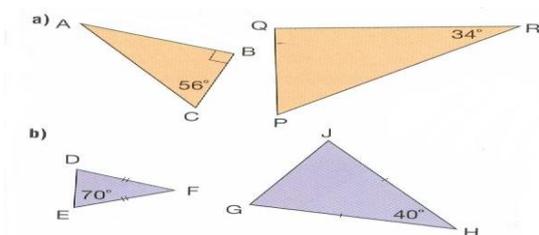


**REVISION WORK SHEET (2018 -2019)**

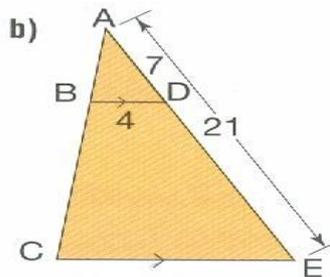
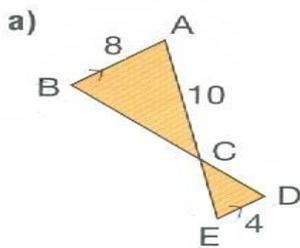
**CLASS: 10.**

**Subject: MATHEMATICS**

1. Each pair of triangles are similar. In each case, state the measures of the angles that are not marked.



2. Five pencils and 7 pens together cost Rs.50, whereas 7 pencils and 5 pens together cost Rs.46. Find the cost of one pencil and that of one pen .
3. Places P and Q are 100km apart on a highway. One car starts from P and another from Q 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?
4. For each diagram, name two similar triangles. Find the length of CE.



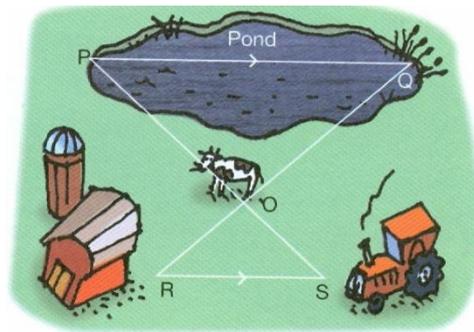
5. The mean of the following distribution table is 50. Find the frequency  $f_1$  and  $f_2$

Class	Frequency
0-20	17
20-40	$f_1$
40-60	32
60-80	$f_2$
80-100	19
Total	120

6. The weight of coffee in 70 packets is shown below. Determine the modal weight

Weight(in gm)	200-201	201-202	202-203	203-204	204-205	205-206
No of packets	12	26	20	9	2	1

7. To find the distance PQ across a farm pond, Marty marks out points R and S so that RS is parallel to PQ. By measuring, she finds that  $RS = 5.7$  m,  $OP = 19.5$  m, and  $OS = 4.2$  m. What is the distance PQ?



8. Solve for  $x$  and  $y$  for the following equations

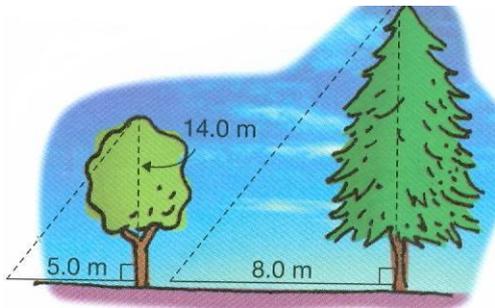
$$(a+b)x + (a-b)y = a^2 + b^2$$

$$(a-b)x + (a+b)y = a^2 - b^2 - 2ab$$

9. Calculate Median age from the given frequency distribution table

Age in Year	No of people
15-19	3
20-24	13
25-29	21
30-34	15
35-39	5
40-44	4
45-49	2

10. A boat traveled 21 miles downstream and back. The trip downstream took 1 hour. The trip back took 7 hours. What is the speed of the boat in still water? What is the speed of the current?
11. The sum of the digits of a certain two digit number is 7. Reversing its digits increases the number by 9. What is the number?
12. Two trees cast shadows as shown. How tall is the evergreen tree?



13. State and prove Pythagoras theorem.
14. Change the data given below to a more than type, less than type frequency distribution. Draw the ogives and find median from it.

Class	0-10	10-20	20-30	30-40	40-50
No. of student	2	4	6	7	3

15. Calculate the mean age( in years) from the following frequency distribution using all the three methods..

Age in Years	Frequency
15-19	3
20-24	15
25-29	21
30-34	15
35-39	5
40-44	4
45-49	2
Total	63

16. Athul Ravi and Tarun go for a morning walk. They step off together and their steps measure 40cm, 42cm and 45cm, respectively.

(a) What is the minimum distance each should walk so that each can cover the same distance in complete steps?

(b) How is morning walk useful?

17. Prove that  $7 - 2\sqrt{3}$  is an irrational number.

18. Obtain all other zeroes of the polynomial  $x^4 - 3x^3 - x^2 + 9x - 6$ , if two of its zeroes are  $\sqrt{3}$  and  $-\sqrt{3}$ .

19. Show that  $\frac{1}{2}$  and  $\frac{-3}{2}$  are the zeroes of the polynomial  $4x^2 + 4x - 3$  and verify the relationship between zeroes and co-efficient of polynomial.

20. Solve  $6x + 3y = 6xy$ ,  $2x + 4y = 5xy$ .

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