

Date \_\_\_\_\_  
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1. Which of the following is a square number?  
a. 1000                      b. 1000000                      c. 100000

2. Which of the following is true?

a.  $\sqrt{9} \times \sqrt{36} = \sqrt{9 \times 36}$

b.  $\sqrt{9} + \sqrt{36} = \sqrt{9+36}$

c.  $\frac{\sqrt{36}}{\sqrt{9}} = \sqrt{\frac{36}{9}}$

d.  $\sqrt{36} - \sqrt{9} = \sqrt{36-9}$

3. Which of the following is not a square no.?

a. 1623

b. 225

c. 7921

d. 1477

e. 8464.

4. The sum of the first 13 odd natural nos is \_\_\_\_\_ . Find without adding.

5. Find a Pythagorean triplet which has 3 as a member.

6. For any natural number  $n, > 1$ , Pythagorean triplet is given by: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

7. Find the square root of 576 by prime factorisation.

8. Find the length of the diagonal of a rectangle of length = 12m and breadth = 35m.



10. Find the least number that must be subtracted from 8291 to make it a perfect square.

11. Find the least number that must be added to 9025 to make it a perfect square. Find the square number and also its root.

12. Find the greatest 3 digit number which is a perfect square. Also find its root.

13. What is the sum of the cubes of the first 5 natural numbers?

14. What is the cube root of 3375?

15. Give two examples of numbers which are both perfect square and perfect cube.

16. What is the least number to be multiplied to 156 to make the number a perfect cube?

17. Change the following questions to mathematical equations using a single variable.

a. Three times a number subtracted from 13 gives 5

b. Half of a number is 20 less than twice of itself.

c. One fourth of a number plus 6 is 8.



18. Solve the ~~ex~~ problems.

a. Ram's father is 40 years old. He is 4 years older than three times Ram's age. Find Ram's age.

b. The difference between the two <sup>numbers</sup> is 48. The ratio of the two numbers is  $7:3$ . What are the two numbers?

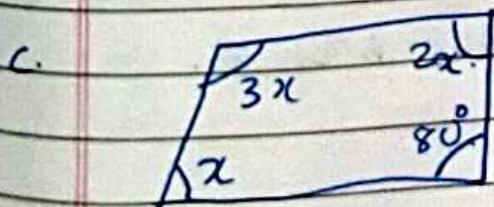
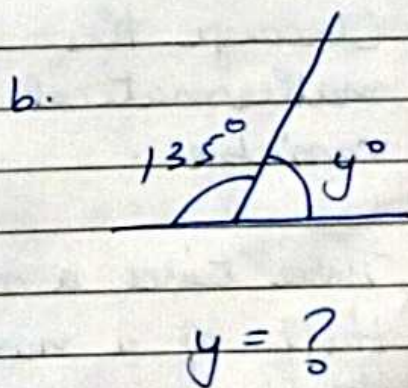
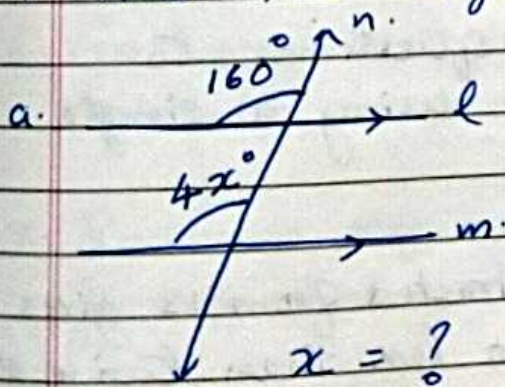
c. The length of a rectangle is twice its breadth. If the perimeter is 72 metre, find the length and breadth of the rectangle.

d. Sum of three consecutive numbers is 264. Find the numbers.

e.  $2(3-h) - 6 = -5h$ . Find  $h$ .

f.  $3 - \frac{x}{2} = -3$ . Find  $x$ .

19. Find the angles or unknowns.





20. What is the perimeter of a parallelogram of sides measuring 9 cm and 11 cm?
21. The lengths of diagonals of a rhombus are 10 cm and 24 cm. What is the length of each of its side?