

Children's Day maths puzzle challenge for CBSE Class 9 and 10

CBSE Math Revision · CBSE Class 9 and 10 · 14 November · Student sheet

Name _____

Class _____

Date _____

No calculator. Every answer works out exactly.

Starter (5 minutes)

1. Today is 14/11. Work out 14×11 in your head.
2. A number is doubled and then 7 is added. The result is 35. What was the number?
3. What is the sum of the interior angles of a hexagon?
4. How many prime numbers are there between 1 and 30?

Main activity (35 minutes)

Task A: Number round

Teams work together; one answer per team.

- a. Find the smallest positive whole number that leaves remainder 1 when divided by 2, 3, 4, 5 or 6, and is exactly divisible by 7.
- b. The HCF of two numbers is 11 and their LCM is 154. One of the numbers is 22. Find the other.
- c. What is the last digit of 7^{14} ?

Task B: Algebra round

Set up an equation for each puzzle.

- a. A father is 4 times as old as his daughter. In 14 years he will be twice as old as her. How old are they now?
- b. The sum of a positive number and its reciprocal is $10/3$. Find the number (two answers).
- c. 3 pens and 2 notebooks cost ₹110. 2 pens and 3 notebooks cost ₹115. Find the cost of one pen and one notebook.

Task C: Geometry round

Draw a sketch first.

- a. A right-angled triangle has shorter sides 9 cm and 12 cm. Find its hypotenuse and its area.
- b. The angles of a quadrilateral are in the ratio 3 : 4 : 5 : 6. Find the largest angle.
- c. What is the angle between the hour and minute hands of a clock at 3:30?

Task D: Chance round

Write each answer as a fraction in its lowest terms.

- a. Two dice are thrown. Find the probability that the total is 7.
- b. A card is picked at random from cards numbered 1 to 50. Find the probability that the number is a multiple of 4 or of 6.
- c. A coin is tossed three times. Find the probability of at least two heads.

Extension

1. How many squares of all sizes are there on an 8 by 8 chessboard?
2. The sum of three consecutive odd numbers is 147. Find the numbers.