

April Daily Tasks Days 15- 21

15. Solve this system of equations

$$3x + 2y = 4$$

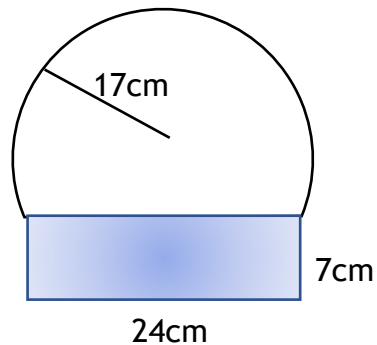
$$4x - 3y = 11$$

16. Two vases are mathematically similar. The smaller vase has a height of 12cm and a volume of  $3600 \text{ cm}^3$ .

The larger vase has a height of 30cm. Work out its volume.

17. A trophy is sitting on its plinth and shown below.

The wooden plinth is 26cm long and 7cm high. The glass is part of a sphere with a radius of 17cm.



Calculate the height of the trophy.

18. State the nature of the roots of the function  $f(x) = 3x^2 + 5x - 4$ .

19. Evaluate  $64^{2/3}$

20. Solve the equation

$$2x^2 - 6x + 3 = 0.$$

Round your answers correct to one decimal place.

21. Fully simplify

$$\sqrt{20} + 4\sqrt{5} - \sqrt{45}$$