

Year 08 Weekly Tutorial - 25

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1. Simplify $\left(\frac{64x^5}{27x^{-1}}\right)^{-\frac{2}{3}}$

2. Solve. $9^{x-1} = 3^5$

3. Solve. $5x - 7y = 5$
 $4x + 2y = 3$

4. Expand and simplify.

a) $5(2x - 3) - (3x - 7)$

b) $(2x - 1)^2(x + 4)$

5. Factorize. $3x^2 - 5x - 12$

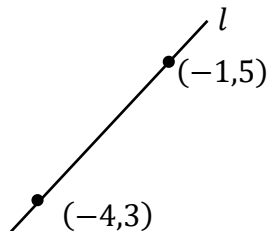
6. Solve by factorization $\frac{x-2}{3} = \frac{x+5}{2x}$

7. Make t the subject, $x = 3 - 2\sqrt{5t + 1}$

8. Find the gradient and y-intercept of the line, $5x - 7y - 14 = 0$

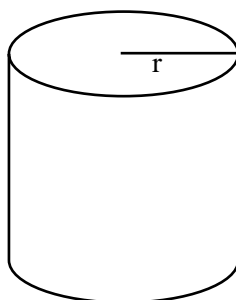
9. Solve, $3 - 2(x + 11) \leq 5x - 17$

10.



Find the equation of line l .

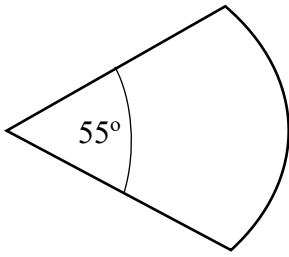
11.



$r = 13$ cm

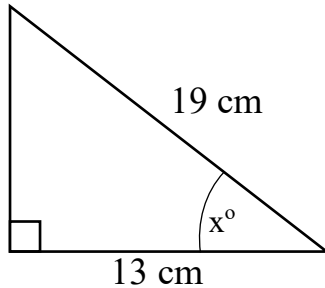
The volume of the solid cylinder is 11149.5 cm^3 . Find the total surface area of the cylinder. Give your answer correct to 1dp.

12.



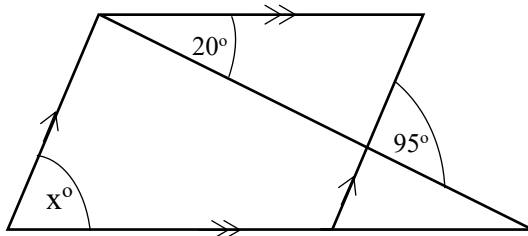
The arc length of the sector is 11.5 cm . Find the area of the sector correct to 1 dp.

13.



Find the angle x° correct to the nearest degree.

14.



Find the angle x° .
Give reasons to your answer.

15. Sophia and Zack share some money in a ratio 5:3.

Sophia gives $\pounds 20$ to Zack. Now the ratio of money between Sophia and Zack is 19:13.

How much money Sophia and Zack are sharing?