

Year 11 Mathematics Learning Journey: Unit 3 - Graphs

Step 11: Area under a curve

How do you know if your answer will be an underestimate or an overestimate?

Step 9: Speed – time graphs

What does a negative section mean on a speed/time graph? Why is it different from a distance/time graph?

Step 8: Distance- time graphs

Nijah goes on a cycle ride. She sets off at 10:30am, travelling at 24km/h for 45 minutes. After a 15 minute break, she continues her journey for another 1.5 hours travelling at 16km/h. She then rests for 45 minutes before returning home at a steady speed of 20km/h. Show this information on a distance/time graph.

Step 5: Sketching quadratics

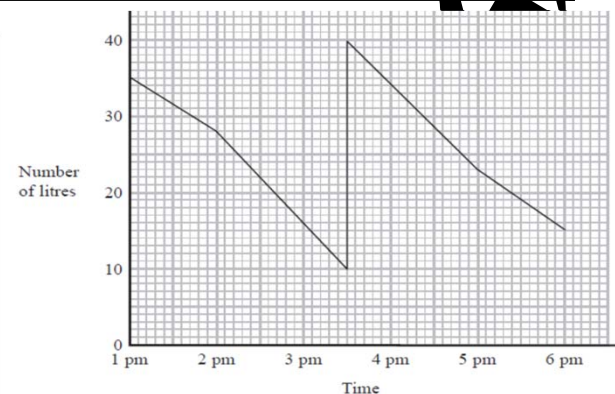
Sketch the graph of $y = x^2 - 4x + 7$

Step 6: Exponential graphs

Draw the graph of $y = (1/3)^x$ for values of x from -4 to 4.

Step 7: Real-life graphs

The graph gives information about the number of litres of petrol in the tank of Jim's car during a journey. How many litres of Petrol did Jim put into the tank.



Step 4: Graph shapes

Complete a table of values of $y = x + \frac{1}{x}$ for x values of: 0.2, 0.4, 0.6, 0.8, 1, 2, 4, 5

Step 3: Perpendicular lines

Line L1 is given by the equations $y = 4x - 7$. Line L2 is given by the equation $4y = 17 - 2x$. Show that L1 and L2 are not perpendicular.

Step 2: Determine points on a line

Show that the point (8, -8) does not lie on the line $y = -1/2x + 4$

Step 1: Equation of a line

Find the equation of the straight line that passes through the points (-4,0) and (0,18).

Achievement resilience

Community PERSEVERANCE **Pride**

SHUTTLEWORTH

COLLEGE