DRAWING QUADRATIC GRAPHS FROM A TABLE OF VALUES

Spiral Questions

S1. A laptop costs £800. Its price increases by 5%. What is the new price?

S2. Find the area of a circle with radius 7cm.

S3. Solve $2x + y = 10$ and $x - y = 2$.

S4. Solve $3x + 2y = 11$ and $5x - 2y = 17$.

Main Questions

M1. $y = x^2$ at $x = 2$

M2. $y = x^2 - 3$ at $x = 0$

M3. $y = x^2 + 2x$ at $x = 1$

M4. $y = 2x^2$ at $x = -1$

M5. $y = x^2 - 4x$ at $x = 3$

M6. $y = -x^2$ at $x = 3$

M7. $y = 3x^2 - 2x + 1$ at $x = -2$

M8. $y = -2x^2 + 3x - 5$ at $x = 1$

M9. $y = 4x^2 - 5x + 3$ at $x = 0.5$

M10. $y = -x^2 - 4x - 4$ at $x = -3$

Apply Questions

A1. A ball's height h in metres at time t seconds is $h = 20t - 5t^2$. At what whole second does it hit the ground?

A2. Profit P in pounds from x items is $P = -x^2 + 12x$. How many items maximise profit? (x from 0 to 12.)

A3. A rectangle's area A in cm^2 with perimeter 24cm is $A = x(12 - x)$. Find length x in cm for maximum area. (Whole numbers.)

A4. A rocket's height h in metres at t seconds is $h = 60t - 5t^2$. Find maximum height. (t from 0 to 12.)

A5. Temperature T in °C at t hours after midday is $T = -t^2 + 4t + 12$. What is the coldest temperature between t=0 and t=5?