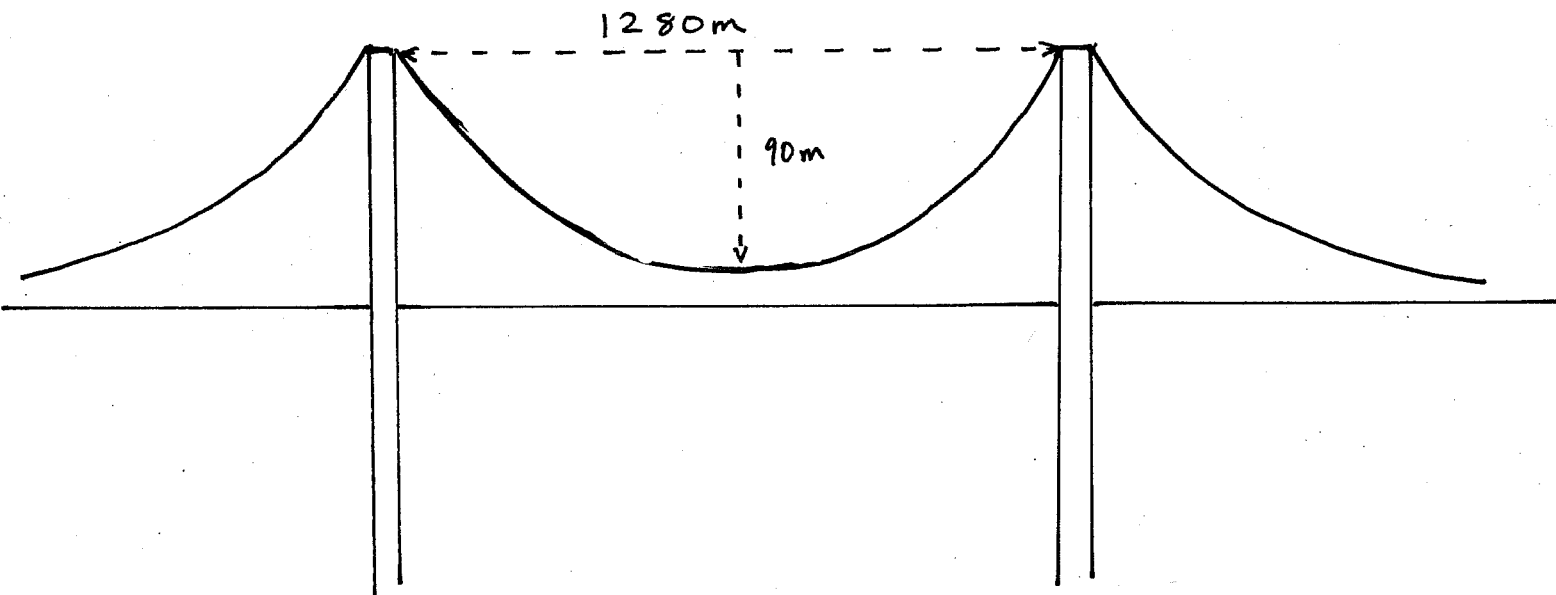


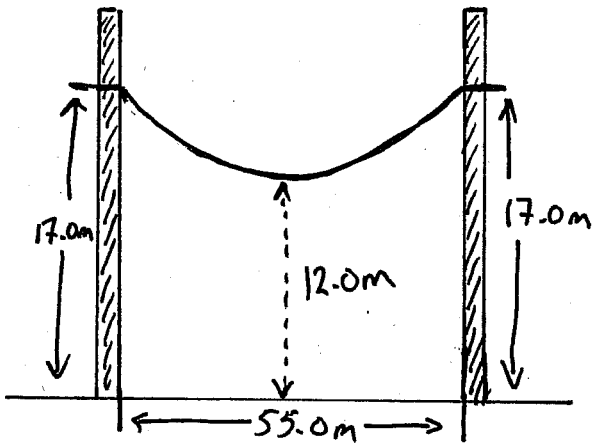
1. FIND THE EQUATION OF THE QUADRATIC THAT PASSES THROUGH:

- a) $(0, 5), (1, 4), (2, 7)$
- b) $(1, 0), (2, -8), (-2, -36)$
- c) $(2, -36), (3, -86), (4, -156)$
- d) $(2, -92), (-3, -157), (-4, -314)$
- e) $(8, 30), (-16, 81), (32, 267)$
- f) $(-17, -883), (17, 859), (34, -3499)$
- g) $(12, 96), (24, 415), (36, 950)$

2. THE FOLLOWING DIAGRAM IS A BRIDGE WITH PARABOLIC SUPPORTING CABLES. WITH THE ORIGIN AT THE LOW POINT OF THE CABLE WRITE AN EQUATION THAT REPRESENTS THE CABLE.



3. A WIRE IS FASTENED 17.0m UP ON EACH OF TWO TELEPHONE POLES THAT ARE 55.0m APART. HALFWAY BETWEEN THE POLES THE WIRE IS 12.0m ABOVE THE GROUND. GIVEN THAT THE WIRE IS PARABOLIC FIND THE HEIGHT OF THE WIRE 13m FROM EITHER POLE.



ANSWERS:

1 a) $y = 2x^2 - 3x + 5$

b) $y = -5x^2 + 7x - 2$

c) $y = -10x^2 + 4$

d) $y = -24x^2 - 11x + 26$

e) $y = \frac{1}{4}x^2 - \frac{1}{8}x + 15$

f) $y = -\frac{52}{17}x^2 + \frac{12}{17}x + 13$

g) $y = \frac{3}{4}x^2 - \frac{5}{12}x - 7$

2. $y = \frac{1}{4550}x^2$

3. 13.4m