

The second degree polynomial

$$P_2(x) = a_1 + a_2(x - 3) + a_3(x - 3)(x - 4)$$

is determined using the given table of Newton divided differences. The correct value of a_2 is ...

x	y			
1	1			
		4		
3	9		1	
		7		0
4	16		1	
		9		
5	25			

It's the second diagonal in the table that starts at the point $x = 3$.

$$a_2 = 7$$

$$P_2(x) = 9 + 7(x - 3) + 1(x - 3)(x - 4).$$