

**Problem 9, page 747**  
 $y=4x-x^2$        $1 \leq x \leq 4$

**Area=9**

**N**      4  
**dx\_4:**    0.75

Left	
x	y
1	3
1.75	3.9375
2.5	3.75
3.25	2.4375
13.125	
<b>9.8438</b>	

Right	
x	y
1.75	3.9375
2.5	3.75
3.25	2.4375
4	0
10.125	
<b>7.5938</b>	

Middle	
x	y
1.375	3.609375
2.125	3.984375
2.875	3.234375
3.625	1.359375
12.1875	
<b>9.1406</b>	

Trapezoidal			
x	y	multplier	y*mult
1	3	1	3
1.75	3.9375	2	7.875
2.5	3.75	2	7.5
3.25	2.4375	2	4.875
4	0	1	0
dx_4/2*			23.25
<b>8.7188</b>			

Simpson			
x	y	multplier	y*mult
1	3	1	3
1.75	3.9375	4	15.75
2.5	3.75	2	7.5
3.25	2.4375	4	9.75
4	0	1	0
dx_4/3*			36
<b>9</b>			

**N**      6  
**dx\_6:**    0.5

Left	
x	y
1	3
1.5	3.75
2	4
2.5	3.75
3	3
3.5	1.75
19.25	
<b>9.625</b>	

Right	
x	y
1.5	3.75
2	4
2.5	3.75
3	3
3.5	1.75
4	0
16.25	
<b>8.125</b>	

Middle	
x	y
1.25	3.4375
1.75	3.9375
2.25	3.9375
2.75	3.4375
3.25	2.4375
3.75	0.9375
18.125	
<b>9.0625</b>	

Trapezoidal			
x	y	multplier	y*mult
1	3	1	3
1.5	3.75	2	7.5
2	4	2	8
2.5	3.75	2	7.5
3	3	2	6
3.5	1.75	2	3.5
4	0	1	0
dx_6:/2*			35.5
<b>8.875</b>			

Simpson			
x	y	multplier	y*mult
1	3	1	3
1.5	3.75	4	15
2	4	2	8
2.5	3.75	4	15
3	3	2	6
3.5	1.75	4	7
4	0	1	0
dx_6:/3*			54
<b>9</b>			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
3						<b>Problem 9, page 747</b>					<b>Area=9</b>								
4		<b>N 4</b>				$y=4x-x^2$		$1 \leq x \leq 4$											
5		<b>dx_4: =3/B4</b>																	
6																			
7		<b>Left</b>		<b>Right</b>		<b>Middle</b>		<b>Trapezoidal</b>				<b>Simpson</b>							
8		<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>multplier</b>	<b>y*mult</b>	<b>x</b>	<b>y</b>	<b>multplier</b>	<b>y*mult</b>		
9		1	=4*B9-B9^2	=1+DX_4	=4*E9-E9^2	=1+DX_4/2	=4*H9-H9^2	1	=4*K9-K9^2	1	=L9*M9			1	=4*P9-P9^2	1	=Q9*R9		
10		=B9+DX_4	=4*B10-B10^2	=E9+DX_4	=4*E10-E10^2	=H9+DX_4	=4*H10-H10^2	=K9+DX_4	=4*K10-K10^2	2	=L10*M10			=P9+DX_4	=4*P10-P10^2	4	=Q10*R10		
11		=B10+DX_4	=4*B11-B11^2	=E10+DX_4	=4*E11-E11^2	=H10+DX_4	=4*H11-H11^2	=K10+DX_4	=4*K11-K11^2	2	=L11*M11			=P10+DX_4	=4*P11-P11^2	2	=Q11*R11		
12		=B11+DX_4	=4*B12-B12^2	=E11+DX_4	=4*E12-E12^2	=H11+DX_4	=4*H12-H12^2	=K11+DX_4	=4*K12-K12^2	2	=L12*M12			=P11+DX_4	=4*P12-P12^2	4	=Q12*R12		
13			=SUM(C9:C12)		=SUM(F9:F12)		=SUM(I9:I12)	=K12+DX_4	=4*K13-K13^2	1	=L13*M13			=P12+DX_4	=4*P13-P13^2	1	=Q13*R13		
14			<b>=DX_4*C13</b>		<b>=DX_4*F13</b>		<b>=DX_4*I13</b>						dx_4/2*	=SUM(N9:N13)				dx_4/3*	=SUM(S9:S13)
15														<b>=N14*DX_4/2</b>					<b>=S14*DX_4/3</b>
16																			
17																			
18																			
19																			
20		<b>N 6</b>																	
21		<b>dx_6: =3/B20</b>																	
22																			
23		<b>Left</b>		<b>Right</b>		<b>Middle</b>		<b>Trapezoidal</b>				<b>Simpson</b>							
24		<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>multplier</b>	<b>y*mult</b>	<b>x</b>	<b>y</b>	<b>multplier</b>	<b>y*mult</b>		
25		1	=4*B25-B25^2	=1+DX_6	=4*E25-E25^2	=1+DX_6/2	=4*H25-H25^2	1	=4*K25-K25^2	1	=L25*M25			1	=4*P25-P25^2	1	=Q25*R25		
26		=B25+DX_6	=4*B26-B26^2	=E25+DX_6	=4*E26-E26^2	=H25+DX_6	=4*H26-H26^2	=K25+DX_6	=4*K26-K26^2	2	=L26*M26			=P25+DX_6	=4*P26-P26^2	4	=Q26*R26		
27		=B26+DX_6	=4*B27-B27^2	=E26+DX_6	=4*E27-E27^2	=H26+DX_6	=4*H27-H27^2	=K26+DX_6	=4*K27-K27^2	2	=L27*M27			=P26+DX_6	=4*P27-P27^2	2	=Q27*R27		
28		=B27+DX_6	=4*B28-B28^2	=E27+DX_6	=4*E28-E28^2	=H27+DX_6	=4*H28-H28^2	=K27+DX_6	=4*K28-K28^2	2	=L28*M28			=P27+DX_6	=4*P28-P28^2	4	=Q28*R28		
29		=B28+DX_6	=4*B29-B29^2	=E28+DX_6	=4*E29-E29^2	=H28+DX_6	=4*H29-H29^2	=K28+DX_6	=4*K29-K29^2	2	=L29*M29			=P28+DX_6	=4*P29-P29^2	2	=Q29*R29		
30		=B29+DX_6	=4*B30-B30^2	=E29+DX_6	=4*E30-E30^2	=H29+DX_6	=4*H30-H30^2	=K29+DX_6	=4*K30-K30^2	2	=L30*M30			=P29+DX_6	=4*P30-P30^2	4	=Q30*R30		
31			=SUM(C25:C30)		=SUM(F25:F30)		=SUM(I25:I30)	=K30+DX_6	=4*K31-K31^2	1	=L31*M31			=P30+DX_6	=4*P31-P31^2	1	=Q31*R31		
32			<b>=DX_6*C31</b>		<b>=DX_6*F31</b>		<b>=DX_6*I31</b>						dx_6/2*	=SUM(N25:N31)				dx_6/3*	=SUM(S25:S31)
33														<b>=N32*DX_6/2</b>					<b>=S32*DX_6/3</b>