A2.N.10: Sigma Notation 1: Know and apply sigma notation

1 What is the value of $\sum_{m=2}^{5}(m^2-1)$

1) 58
2) 54
3) 53
4) 50

2 What is the value of $\sum_{k=1}^{3}(2-k)^2$?

1) 1
2) 2
3) 3
4) 0

3 The value of the expression $\sum_{r=3}^{5}(-r^2+r)$ is

1) −38
2) −12
3) 26
4) 62

4 What is the value of $\sum_{m=1}^{3}(2m+1)^{m-1}$?

1) 15
2) 55
3) 57
4) 245

5 The value of the expression $2\sum_{n=0}^{2}(n^2+2^n)$ is

1) 12
2) 22
3) 24
4) 26

6 Evaluate: $\sum_{n=1}^{5}(n^2+n)$

7 Evaluate: $\sum_{n=1}^{3}(-n^4-n)$

8 Evaluate: $3\sum_{x=2}^{4}(x^2-5)$

9 Evaluate: $10+\sum_{n=1}^{5}(n^3-1)$

A2.N.10: Sigma Notation 1: Know and apply sigma notation
Answer Section

1 ANS: 4

m	m^2-1	
2	2^2-1	3
3	3^2-1	8
4	4^2-1	15
5	5^2-1	24
Σ		50

REF: 060201b

2 ANS: 2

k	$(2-k)^2$	
1	$(2-1)^2$	1
2	$(2-2)^2$	0
3	$(2-3)^2$	1
Σ		2

REF: 060903b

3 ANS: 1

n	3	4	5	Σ
$-r^2+r$	$-3^2+3=-6$	$-4^2+4=-12$	$-5^2+5=-20$	-38

REF: 061118a2

4 ANS: 2

m	$(2m+1)^{m-1}$		
1	$(2(1)+1)^{1-1}$	3^0	1
2	$(2(2)+1)^{2-1}$	5^1	5
3	$(2(3)+1)^{3-1}$	7^2	49
Σ			55

REF: 060117b

5 ANS: 3

n	0	1	2	Σ
n^2+2^n	$0^2+2^0=1$	$1^2+2^2=3$	$2^2+2^2=8$	12

$2 \times 12 = 24$

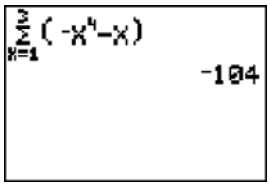
REF: fall0911a2

6 ANS:

n	$n^2 + n$	
1	$1^2 + 1$	2
2	$2^2 + 2$	6
3	$3^2 + 3$	12
4	$4^2 + 4$	20
5	$5^2 + 5$	30
Σ		70

REF: 080521b

7 ANS:



−104.

REF: 011230a2

8 ANS:

x	$x^2 - 5$	
2	$2^2 - 5$	-1
3	$3^2 - 5$	4
4	$4^2 - 5$	11
Σ		14

$3 \times 14 = 42$

REF: 080823b

9 ANS:

230. $10 + (1^3 - 1) + (2^3 - 1) + (3^3 - 1) + (4^3 - 1) + (5^3 - 1) = 10 + 0 + 7 + 26 + 63 + 124 = 230$

REF: 011131a2