

• **Quadruples: $2^n(3^n+1)$, $(2^n+1)(3^n+1)$, 6^n+8^n+3 , $(n+1)(6^n+5)$ give**

$$a(n) = (6^n+8^n+3+(-1)^n-2^{n+1}((-1)^{(2^n+1-(-1)^n)/4}+(-1)^{(2^n-1+(-1)^n)/4}))/16.$$

Quadruples: $2^n(3^n+1)$, $(2^n+1)(3^n+1)$, $(n+1)(6^n+5)$, 6^n+8^n+3 give

$$a(n) = (2^n(3^n+4^n+3)+2^{n+1}(3^n+1)(-1)^n-5^{n+1}(-1)^{(2^n-1+(-1)^n)/4}-3^{n+1}(2^n+1)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $2^n(3^n+1)$, 6^n+8^n+3 , $(2^n+1)(3^n+1)$, $(n+1)(6^n+5)$ give**

$$a(n) = (2^n(3^n+4^n+3)-6^{n+1}(n+1)(-1)^n+(6^n+5)(-1)^{(2^n-1+(-1)^n)/4}-5^{n+1}(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $2^n(3^n+1)$, 6^n+8^n+3 , $(n+1)(6^n+5)$, $(2^n+1)(3^n+1)$ give**

$$a(n) = (2^n(3^n+4^n+6^n)+2^{n+1}(3^n-2^n)(-1)^n+(6^n-1)(-1)^{(2^n-1+(-1)^n)/4}-(12^n+7^n)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $2^n(3^n+1)$, $(n+1)(6^n+5)$, $(2^n+1)(3^n+1)$, 6^n+8^n+3 give**

$$a(n) = (2^n(3^n+4^n+6^n)-6^{n+1}(n+2)(-1)^n+3^{n+1}((4^n+3^n)(-1)^{(2^n-1+(-1)^n)/4}-(2^n+3^n)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $2^n(3^n+1)$, $(n+1)(6^n+5)$, 6^n+8^n+3 , $(2^n+1)(3^n+1)$ give**

$$a(n) = (6^n+8^n+15-11^{n+1}(-1)^n+2^{n+1}(3^{2^n+1})(-1)^{(2^n-1+(-1)^n)/4}-(6^n+5)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

<i>abcd</i>	<i>bacd</i>
<i>abdc</i>	<i>badc</i>
<i>acbd</i>	<i>bcad</i>
<i>acdb</i>	<i>bcda</i>
<i>adbc</i>	<i>bdac</i>
<i>adcb</i>	<i>bdca</i>

• **Quadruples: $(2^n+1)(3^n+1)$, $2^n(3^n+1)$, 6^n+8^n+3 , $(n+1)(6^n+5)$ give**

$$a(n) = (2^n(3^n+4^n+3)+6^{n+1}(n+1)(-1)^n+(-1)^{(2^n-1+(-1)^n)/4}+3^{n+1}(2^n+1)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $(2^n+1)(3^n+1)$, $2^n(3^n+1)$, $(n+1)(6^n+5)$, 6^n+8^n+3 give**

$$a(n) = (6^n+8^n+9+(12^n+7^n)(-1)^n-2^{n+1}((-1)^{(2^n-1+(-1)^n)/4}-(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $(2^n+1)(3^n+1)$, 6^n+8^n+3 , $2^n(3^n+1)$, $(n+1)(6^n+5)$ give**

$$a(n) = (2^n(3^n+4^n+6^n)-6^{n+1}(-1)^n+(12^n+7^n)(-1)^{(2^n-1+(-1)^n)/4}+3^{n+1}(2^n-1)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $(2^n+1)(3^n+1)$, 6^n+8^n+3 , $(n+1)(6^n+5)$, $2^n(3^n+1)$ give**

$$a(n) = (6^n+8^n+21+(12^n-5^n)(-1)^n+2^{n+1}(6^n-1)((-1)^{(2^n-1+(-1)^n)/4}-(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $(2^n+1)(3^n+1)$, $(n+1)(6^n+5)$, $2^n(3^n+1)$, 6^n+8^n+3 give**

$$a(n) = (2^n(3^n+4^n+9)-6^{n+1}(n+1)(-1)^n+(18^n+11^n)(-1)^{(2^n-1+(-1)^n)/4}-7^{n+1}(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

• **Quadruples: $(2^n+1)(3^n+1)$, $(n+1)(6^n+5)$, 6^n+8^n+3 , $2^n(3^n+1)$ give**

$$a(n) = (2^n(3^n+4^n+12^n)+6^{n+1}(n-2)(-1)^n+(18^n+5^n)(-1)^{(2^n-1+(-1)^n)/4}-(12^n+1^n)(-1)^{(2^n+1-(-1)^n)/4}))/16.$$

- **Quadruples: $6*n^2+8*n+3$, $2*n*(3*n+1)$, $(2*n+1)*(3*n+1)$, $(n+1)*(6*n+5)$ give**
 $a(n) = (2*(3*n^2+4*n+6)+6*(n+2)*(-1)^n+(6*n+11)*(-1)^{(2*n-1+(-1)^n)/4}+(12*n+13)*(-1)^{(2*n+1-(-1)^n)/4})/16.$
- **Quadruples: $6*n^2+8*n+3$, $2*n*(3*n+1)$, $(n+1)*(6*n+5)$, $(2*n+1)*(3*n+1)$ give**
 $a(n) = (2*(3*n^2+4*n+9)+2*(9*n+7)*(-1)^n+(6*n+5)*(-1)^{(2*n-1+(-1)^n)/4}+11*(-1)^{(2*n+1-(-1)^n)/4})/16.$
- **Quadruples: $6*n^2+8*n+3$, $(2*n+1)*(3*n+1)$, $2*n*(3*n+1)$, $(n+1)*(6*n+5)$ give**
 $a(n) = (6*n^2+8*n+15+13*(-1)^n+2*(6*n+5)*((-1)^{(2*n-1+(-1)^n)/4}+((-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $6*n^2+8*n+3$, $(2*n+1)*(3*n+1)$, $(n+1)*(6*n+5)$, $2*n*(3*n+1)$ give**
 $a(n) = (2*(3*n^2+4*n+12)+2*(9*n+4)*(-1)^n+(12*n+1)*(-1)^{(2*n-1+(-1)^n)/4}-3*(2*n-5)*(-1)^{(2*n+1-(-1)^n)/4})/16.$
- **Quadruples: $6*n^2+8*n+3$, $(n+1)*(6*n+5)$, $2*n*(3*n+1)$, $(2*n+1)*(3*n+1)$ give**
 $a(n) = (6*n^2+8*n+27+(-1)^n+2*(3*(4*n+3)*(-1)^{(2*n-1+(-1)^n)/4}+(-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $6*n^2+8*n+3$, $(n+1)*(6*n+5)$, $(2*n+1)*(3*n+1)$, $2*n*(3*n+1)$ give**
 $a(n) = (2*(3*n^2+4*n+15)+6*(n-1)*(-1)^n+3*((8*n+5)*(-1)^{(2*n-1+(-1)^n)/4}-(2*n-3)*(-1)^{(2*n+1-(-1)^n)/4}))/16.$

<i>cabd</i>	<i>dabc</i>
<i>cabd</i>	<i>dacb</i>
<i>cbad</i>	<i>dbcd</i>
<i>cbda</i>	<i>dbda</i>
<i>cdab</i>	<i>dcab</i>
<i>cdba</i>	<i>dcba</i>

- **Quadruples: $(n+1)*(6*n+5)$, $2*n*(3*n+1)$, $(2*n+1)*(3*n+1)$, $6*n^2+8*n+3$ give**
 $a(n) = (6*n^2+8*n+21+(12*n+19)*(-1)^n+2*(3*(2*n+3)*(-1)^{(2*n-1+(-1)^n)/4}+(6*n+11)*(-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $(n+1)*(6*n+5)$, $2*n*(3*n+1)$, $6*n^2+8*n+3$, $(2*n+1)*(3*n+1)$, give**
 $a(n) = (2*(3*n^2+4*n+12)+2*(9*n+10)*(-1)^n+3*((4*n+5)*(-1)^{(2*n-1+(-1)^n)/4}+(2*n+7)*(-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $(n+1)*(6*n+5)$, $(2*n+1)*(3*n+1)$, $2*n*(3*n+1)$, $6*n^2+8*n+3$ give**
 $a(n) = (2*(3*n^2+4*n+12)+2*(3*n+10)*(-1)^n+(18*n+17)*(-1)^{(2*n-1+(-1)^n)/4}+(12*n+19)*(-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $(n+1)*(6*n+5)$, $(2*n+1)*(3*n+1)$, $6*n^2+8*n+3$, $2*n*(3*n+1)$ give**
 $a(n) = (2*(3*n^2+4*n+15)+2*(9*n+7)*(-1)^n+(18*n+11)*(-1)^{(2*n-1+(-1)^n)/4}+25*(-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $(n+1)*(6*n+5)$, $6*n^2+8*n+3$, $2*n*(3*n+1)$, $(2*n+1)*(3*n+1)$ give**
 $a(n) = (2*(3*n^2+4*n+15)+2*(3*n+7)*(-1)^n+3*((8*n+7)*(-1)^{(2*n-1+(-1)^n)/4}+(2*n+5)*(-1)^{(2*n+1-(-1)^n)/4}))/16.$
- **Quadruples: $(n+1)*(6*n+5)$, $6*n^2+8*n+3$, $(2*n+1)*(3*n+1)$, $2*n*(3*n+1)$ give**
 $a(n) = (6*n^2+8*n+33+(12*n+7)*(-1)^n+2*(3*(4*n+3)*(-1)^{(2*n-1+(-1)^n)/4}+11*(-1)^{(2*n+1-(-1)^n)/4}))/16.$