

In[2]:= (\*Домашнее задание 1\*)

FullSimplify[Sum[k^2, {k, a, a +  $\theta$  - 1}]] (\*Расчет 1.1\*)

Out[2]= 
$$\frac{1}{6} \theta (1 + 6(-1 + a)a - 3\theta + 6a\theta + 2\theta^2)$$

In[3]:= FullSimplify[1/ $\theta$  - (a + ( $\theta$  - 1)/2)^2] (\*Расчет 1.2\*)

Out[3]= 
$$\frac{1}{12} (-1 + \theta^2)$$

Limit[-y Exp[-y^2/2], y  $\rightarrow$  Infinity] - Limit[-y Exp[-y^2/2], y  $\rightarrow$  -Infinity] (\*Расчет 1.3\*)

Out[5]= 0

1/(4.5\*Sqrt[2 Pi]) NIntegrate[Exp[-(x - 8)^2/(2\*4.5^2)], {x, -Infinity, 7}] (\*Расчет 1.4\*)

Out[3]= 0.41207

In[2]:=