For the given problem annualized return is calculated using:

**Cumulative return for investment and annualized return using compound interest Basis**

Cumulative return = total return (bidder price money) – total investment (bidder invested money)/total investment

Total investment = total invested money per month by bidder

i.e. 2000\*25 – 6200(total dividend amount)

Total dividend amount is nothing the money that distributed equally to every for a 25 month period and its amount vary monthly and also based on the Demand. (With reference to chit funds function)

Annualized return = ((1+cumulative return) ^ (12/total no of months))\*100

Annualized return for first month and last is given by substituting the respective values of that month bid winner in above.

Results (First month – Last month) case1:

-7.183019602665885,

-4.8389921812552306,

-1.4358199516118053,

1.8445743333721731,

-7.183019602665885,

-4.8389921812552306,

-3.6901208067807834,

-2.5559079450003797,

-7.183019602665885,

-4.8389921812552306,

-1.4358199516118053,

1.8445743333721731,

-7.183019602665885,

-4.8389921812552306,

-3.6901208067807834,

-3.6901208067807834,

-6.0030899928315566,

-4.8389921812552306,

-1.4358199516118053,

-1.4358199516118053,

-2.5559079450003797,

-0.32935463958428945,

0.76396125199378329,

1.8445743333721731,

3.969357358648673

**Cumulative return for total return (bidding amount after commission) and annualized return using compound interest Basis**

The Only change is in cumulative return, remaining process continues same as above:

Cumulative return = total return (bidder price money) – total investment (bidder invested money)/total return

Results (First month – Last month) case2:

-8.4498212438431466,

-5.3819763149041133,

-1.4800966145948613,

1.7763071641212491,

-8.4498212438431466,

-5.3819763149041133,

-3.9975757428092562,

-2.6996895945220034,

-8.4498212438431466,

-5.3819763149041133,

-1.4800966145948613,

1.7763071641212491,

-8.4498212438431466,

-5.3819763149041133,

-3.9975757428092562,

-3.9975757428092562,

-6.862381274756757,

-5.3819763149041133,

-1.4800966145948613,

-1.4800966145948613,

-2.6996895945220034,

-0.33163014500219301,

0.75199245582957541,

1.7763071641212491,

3.6660733383456767

**Similarly we can find using Simple Interest (But it is not preferred) Basis**

Annualized return = (12/total no of months)\*100\*cumulative return of investment

Results (First month – Last month) case3:

-6.9041095890410951,

-4.712328767123287,

-1.4246575342465753,

1.8630136986301369,

-6.9041095890410951,

-4.712328767123287,

-3.6164383561643838,

-2.5205479452054793,

-6.9041095890410951,

-4.712328767123287,

-1.4246575342465753,

1.8630136986301369,

-6.9041095890410951,

-4.712328767123287,

-3.6164383561643838,

-3.6164383561643838,

-5.8082191780821919,

-4.712328767123287,

-1.4246575342465753,

-1.4246575342465753,

-2.5205479452054793,

-0.32876712328767121,

0.76712328767123283,

1.8630136986301369,

4.0547945205479454

Annualized return = (12/total no of months)\*100\*cumulative return of total return

Results (First month – Last month) case4:

-8.0640000000000001,

-5.225316455696202,

-1.4682352941176471,

1.793406593406593,

-8.0640000000000001,

-5.225316455696202,

-3.9111111111111119,

-2.6602409638554216,

-8.0640000000000001,

-5.225316455696202,

-1.4682352941176471,

1.793406593406593,

-8.0640000000000001,

-5.225316455696202,

-3.9111111111111119,

-3.9111111111111119,

-6.6077922077922064,

-5.225316455696202,

-1.4682352941176471,

-1.4682352941176471,

-2.6602409638554216,

-0.33103448275862069,

0.75505617977528094,

1.793406593406593,

3.7389473684210528

**Graphical Representation of all the four cases above:**

