Miscleneous Problems

SSC GD Maths Worked Out and short Trick Examples

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Problem 1: Work And Efficiency

Question is taken from here

Let Rimi started a work and after finishing 10% of the work she found that 8 days were passed by. Now, she decided to appoint Simi into the work who has 20% more efficiency than Rimi. Together if they started working, how many days it will take to finish the remaining work?

Answer 1

Now, observe that if Rimi worked with 100% proficiency then the rest of the work she can finish alone in $8 \times \frac{90}{10} = 72$ days. But, when Simi joined with 20% more efficiency we have total efficiency $(100 + 120) = 220\%$.
Now, with 100% efficiency rest work is done in 72 days
with 1% efficiency rest work is done in 72×100 days,
With 220% efficiency rest work can be done in $\frac{7200}{220} = \frac{360}{11}$ days.

Notice that it is important to figure out that work efficiency is inversely proportional to the days required to finish a fixed work. And if two persons or more join we just will add their efficiency to achieve the above shortcut method.