Who are the semi-finalists?

Here are the possible scenarios: Y – Yes; N-No; NRR – Net Run Rate

SA vs Eng		Afghanistan vs Aus		Semifinalist(Y/N)			
Win	**Lose**	**Win**	**Lose**	**SA**	**Eng**	**Afg**	**Aus**
SA	England	Australia	Afghanistan	Y	N	N	Y
SA	England	Afghanistan	Australia	Y	N	Y	N
England	SA	Australia	Afghanistan	Y	N	N	Y
England	SA	Afghanistan	Australia	NRR*	N	Y	NRR*
England	SA	Washout	Washout	NRR*	N	NRR*	Y
SA	England	Washout	Washout	Y	N	N	Y
Washout	Washout	Australia	Afghanistan	Y	N	N	Y
Washout	Washout	Afghanistan	Australia	Y	N	Y	N
Washout	Washout	Washout	Washout	Y	N	N	Y

*Team with greater NRR will become the semi-finalist

Solution:

1. What do you think are the total possible outcomes?

   Let us count the total number of possibilities. **It is 9**

2. What is the probability that both Aus and SA are semi-finalists?

   Let us take a tally of 'Y' value occurring for both Aus and SA. We will have to include NRR* also, as it is one of the chances that they become a semi-finalist. So, there are 6 chances for both the teams to become a semi-finalist.

   Probability (SA and Aus)= $\frac{6}{9} = \frac{2}{3}$

3. What is the probability of Afghanistan becoming a semi-finalist?
   Count the number of 'Y' and 'NRR' (as a positive chance) for Afghanistan. There are 4 chances.
   Hence, **Probability(Afg) =** $\frac{4}{9}$

4. What is the probability Australia doesn't enter the semi-finals?

   Count the number of 'N' and 'NRR' (as a negative chance) for Australia.

   Hence, **Probability(Not Aus) =** $\frac{3}{9} = \frac{1}{3}$

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