

Response Rate Calculations

Calculating response rates is an essential aspect of survey reporting. While the response rate alone is not sufficient evidence to indicate biases, a low response rate may hint at response bias (whereby the sample estimates deviate from the population parameters, potentially in unknown ways). This activity asks you to calculate response rates, cooperation rates, and refusal rates for different survey fielding periods.

As a reminder, definitions of each response rate used above are as follows, along with example calculations using the data from the first row of the below table:

- $RR1 = \frac{I}{(I+P)+(R+NC)+U} = \frac{2300}{2300+200+1000+1000+5000} = 24.2\%$
- $RR3 = \frac{I}{(I+P)+(R+NC)+(e*U)} = \frac{2300}{2300+200+1000+1000+(e*5000)} = \frac{2300}{4500+(e*5000)} = (24.2\%, 51.1\%)$
- $COOP1 = \frac{I}{(I+P)+R} = \frac{2300}{2300+200+1000} = 65.7\%$
- $REF1 = \frac{R}{(I+P)+(R+NC)+U} = \frac{1000}{2300+200+1000+1000+5000} = 10.5\%$

	I	P	Ref.	NC	Unk.	RR1	RR3	COOP1	REF1
<i>Example</i>	2300	200	1000	1000	5000	24.2%	(24.2%, 51.1%)	65.7%	10.5%
Sample 1	800	100	200	0	0				
Sample 2	800	400	100	0	100				
Sample 3	1200	0	3500	800	2000				
Sample 4	600	50	50	100	200				
Sample 5	350	650	150	0	100				
Sample 6	22000	2500	14000	5000	20000				