

MEASUREMENT/CALCULATION WORKSHEET

Measure/Calculate P1 through P9 blank measurements for each unknown, record readings next to (*)

Circle One:

Measurements

Calculations

	Key	(R)Resistor Values (color)					R=EXI			(E) Measured Voltage Drop					E=I/R
SP-100	R1	R2	R3	R4	R5	Rt			R1 vd	R2 vd	R3 vd	R4 vd	R5 vd	vdTotal	
	ohms	ohms	ohms	ohms	ohms	ohms	mA	Volts	Volts	volts	volts	volts	volts	vdTotal	
P1	300	300	200			150	33	5.05	2.53	2.53	5.05			5.05	
P2	30	120	120			90	55	5.03	1.68	3.35	3.35			5.03	
P3	30	120	120	30		96	52	5.03	1.564	3.47	2.77	0.695		5.03	
P4	120	470	100	30		118	43	5.05	1.03	4.02	4.04	1.01		5.05	
P5	30	30	120	200	200	90	55	5.03	0.67	1.678	2.68	3.36	3.36	5.03	
P6	120	30	30	30	30	160	31	5.05	3.79	0.948	0.316	0.316	0.316	5.05	
P7	120	30	200			146	34	5.06	4.15	0.905	0.905			5.06	
P8	120	30	120	120		65	77	5.01	5.01	0.837	0.837	4.17		5.01	
P9	30	300	200			125	40	5.05	0.459	4.59	5.05			5.05	
									(I)Calculated Amperage					I=V/R	
									R1	R2	R3	R4	R5	I Total	
									mA	mA	mA	mA	mA	mA	
								P1	8.4	8.4	25			33.4	
								P2	56	28	28			56	
								P3	52.1	28.9	23	23		52.51	
								P4	8.5	8.5	38.8	38.8		47.3	
								P5	22.3	55.9	22.3	16.8	16.8	55.9	
								P6	31.58	31.58	10.5	10.5	10.5	31.58	
								P7	34.58	30.17	4.52			34.58	
								P8	41.75	27.9	6.97	34.75		76.62	
								P9	15.3	15.3	25.25			40.55	

SP-100-R WS
RESISTANCE MEASUREMENT/CALCULATION WORKSHEET
Measure/Calculate the resistance in each circuit and record readings next to (*)
Circle One:
Measurements
Calculations

WS	(R)Resistor Values (color)					R=EXI		(E) Measured Voltage Drop						E=I/R
SP-100-R	R1	R2	R3	R4	R5	Rt	It		R1 vd	R2 vd	R3 vd	R4 vd	R5 vd	vdTotal
WS	ohms	ohms	ohms	ohms	ohms	ohms	mA	Volts	Volts	volts	volts	volts	volts	vdTotal
P1	*	300	200			*	33	*	2.53	2.53	5.05			5.05
P2	30	*	120			*	55	*	1.68	3.35	3.35			5.03
P3	30	120	*	30		*	52	*	1.564	3.47	2.77	0.695		5.03
P4	120	470	100	*		*	43	*	1.03	4.02	4.04	1.01		5.05
P5	30	*	120	200	200	*	55	*	0.67	1.678	2.68	3.36	3.36	5.03
P6	120	30	*	30	30	*	31	*	3.79	0.948	0.316	0.316	0.316	5.05
P7	120	*	200			*	34	*	4.15	0.905	0.905			5.06
P8	*	30	120	120		*	77	*	5.01	0.837	0.837	4.17		5.01
P9	30	300	200	*		*	40	*	0.459	4.59	5.05			5.05
									(I)Calculated Amperage					I=V/R
									R1	R2	R3	R4	R5	I Total
									mA	mA	mA	mA	mA	mA
								P1	8.4	8.4	25			33.4
								P2	56	28	28			56
								P3	52.1	28.9	23	23		52.51
								P4	8.5	8.5	38.8	38.8		47.3
								P5	22.3	55.9	22.3	16.8	16.8	55.9
								P6	31.58	31.58	10.5	10.5	10.5	31.58
								P7	34.58	30.17	4.52			34.58
								P8	41.75	27.9	6.97	34.75		76.62
								P9	15.3	15.3	25.25			40.55

SP-100-E WS
VOLTAGE MEASUREMENT/CALCULATION WORKSHEET
Measure/Calculate voltage (E) in each circuit and record readings next to (*)
Circle One:
Measurements
Calculations

SP-100-E	R1	R2	R3	R4	R5	Rt			R1 vd	R2 vd	R3 vd	R4 vd	R5 vd	vdTotal
WS	ohms	ohms	ohms	ohms	ohms	ohms	mA	Volts	Volts	volts	volts	volts	volts	vdTotal
P1	300	300	200			150	33	*	*	*	*			*
P2	30	120	120			90	55	*	*	*	*			*
P3	30	120	120	30		96	52	*	*	*	*	*		*
P4	120	470	100	30		118	43	*	*	*	*	*		*
P5	30	30	120	200	200	90	55	*	*	*	*	*	*	*
P6	120	30	30	30	30	160	31	*	*	*	*	*	*	*
P7	120	30	200			146	34	*	*	*	*			*
P8	120	30	120	120		65	77	*	*	*	*	*		*
P9	30	300	200			125	40	*	*	*	*			*
									(I) Calculated Amperage				I=V/R	
									R1	R2	R3	R4	R5	I Total
									mA	mA	mA	mA	mA	mA
								P1	8.4	8.4	25			33.4
								P2	56	28	28			56
								P3	52.1	28.9	23	23		52.51
								P4	8.5	8.5	38.8	38.8		47.3
								P5	22.3	55.9	22.3	16.8	16.8	55.9
								P6	31.58	31.58	10.5	10.5	10.5	31.58
								P7	34.58	30.17	4.52			34.58
								P8	41.75	27.9	6.97	34.75		76.62
								P9	15.3	15.3	25.25			40.55

SP-100-I WS
MEASUREMENT/CALCULATION WORKSHEET

Measure/Calculate P1 through P9 blank measurements for each unknown, record readings next to (*)

Circle One:
Measurements
Calculations

SP-100-I	R1	R2	R3	R4	R5	Rt			R1 vd	R2 vd	R3 vd	R4 vd	R5 vd	vdTotal
WS	ohms	ohms	ohms	ohms	ohms	ohms	mA	Volts	Volts	volts	volts	volts	volts	vdTotal
P1	300	300	200			150	*	*	2.53	2.53	5.05			5.05
P2	30	120	120			90	*	*	1.68	3.35	3.35			5.03
P3	30	120	120	30		96	*	*	1.564	3.47	2.77	0.695		5.03
P4	120	470	100	30		118	*	*	1.03	4.02	4.04	1.01		5.05
P5	30	30	120	200	200	90	*	*	0.67	1.678	2.68	3.36	3.36	5.03
P6	120	30	30	30	30	160	*	*	3.79	0.948	0.316	0.316	0.316	5.05
P7	120	30	200			146	*	*	4.15	0.905	0.905			5.06
P8	120	30	120	120		65	*	*	5.01	0.837	0.837	4.17		5.01
P9	30	300	200			125	*	*	0.459	4.59	5.05			5.05
									(I) Calculated Amperage				I=V/R	
									R1	R2	R3	R4	R5	I Total
									mA	mA	mA	mA	mA	mA
								P1	*	8.4	25			33.4
								P2	56	*	28			56
								P3	52.1	28.9	*	23		52.51
								P4	8.5	8.5	38.8	*		47.3
								P5	*	55.9	*	16.8	16.8	55.9
								P6	*	31.58	10.5	10.5	10.5	31.58
								P7	34.58	30.17	*			34.58
								P8	41.75	*	6.97	34.75		76.62
								P9	15.3	15.3	*			40.55

SP-100-C WS
MEASUREMENT/CALCULATION WORKSHEET

Measure/Calculate P1 through P9 blank measurements for each unknown, record readings next to (*)

Circle One:
Measurements
Calculations

SP-100-C	R1	R2	R3	R4	R5	Rt			R1 vd	R2 vd	R3 vd	R4 vd	R5 vd	vdTotal
WS	ohms	ohms	ohms	ohms	ohms	ohms	mA	Volts	Volts	volts	volts	volts	volts	vdTotal
P1	300	*	200			150	33	*	2.53	2.53	5.05			5.05
P2	30	*	120			90	55	*	1.68	3.35	3.35			5.03
P3	30	120	120	30		96	*	*	1.564	3.47	2.77	0.695		5.03
P4	120	470	100	30		*	43	*	1.03	4.02	4.04	1.01		5.05
P5	*	30	120	200	200	90	55	*	0.67	*	2.68	3.36	3.36	5.03
P6	120	30	30	30	30	*	31	*	3.79	0.948	0.316	0.316	0.316	5.05
P7	120	*	200			146	34	*	*	0.905	0.905			5.06
P8	120	30	120	120		65	77	*	5.01	*	0.837	4.17		5.01
P9	30	300	200			125	*	*	0.459	*	5.05			5.05
									(I)Calculated Amperage				I=V/R	
									R1	R2	R3	R4	R5	I Total
									mA	mA	mA	mA	mA	mA
								P1	8.4	8.4	*			33.4
								P2	56	*	28			56
								P3	52.1	28.9	23	23		52.51
								P4	8.5	8.5	*	38.8		47.3
								P5	22.3	55.9	22.3	*	16.8	55.9
								P6	31.58	*	10.5	10.5	10.5	31.58
								P7	34.58	30.17	*			34.58
								P8	41.75	27.9	*	34.75		76.62
								P9	15.3	*	25.25			*

SP-100-M WS
MEASUREMENT/CALCULATION WORKSHEET

Measure/Calculate P1 through P9 blank measurements for each unknown, record readings next to (*)

Circle One:
Measurements
Calculations

SP-100-M	R1	R2	R3	R4	R5	Rt			R1 vd	R2 vd	R3 vd	R4 vd	R5 vd	vdTotal
WS	ohms	ohms	ohms	ohms	ohms	ohms	mA	Volts	Volts	volts	volts	volts	volts	vdTotal
P1	300	300	200			*	*	*	*	*	*	*	*	*
P2	30	120	120			*	*	*	*	*	*	*	*	*
P3	30	120	120	30		*	*	*	*	*	*	*	*	*
P4	120	470	100	30		*	*	*	*	*	*	*	*	*
P5	30	30	120	200	200	*	*	*	*	*	*	*	*	*
P6	120	30	30	30	30	*	*	*	*	*	*	*	*	*
P7	120	30	200			*	*	*	*	*	*	*	*	*
P8	120	30	120	120		*	*	*	*	*	*	*	*	*
P9	30	300	200			*	*	*	*	*	*	*	*	*
									(I) Calculated Amperage				I=V/R	
									R1	R2	R3	R4	R5	I Total
									mA	mA	mA	mA	mA	mA
								P1	8.4	8.4	25			33.4
								P2	56	28	28			56
								P3	52.1	28.9	23	23		52.51
								P4	8.5	8.5	38.8	38.8		47.3
								P5	22.3	55.9	22.3	16.8	16.8	55.9
								P6	31.58	31.58	10.5	10.5	10.5	31.58
								P7	34.58	30.17	4.52			34.58
								P8	41.75	27.9	6.97	34.75		76.62
								P9	15.3	15.3	25.25			40.55