Task 1

Determine the total resistance in the following arrangements.
$R_{TOTAL} = R_1 + R_2$

a. 12 Ω — 12 Ω

b. 50 Ω — 70 Ω

c. 250 Ω — 370 Ω

d. 56 Ω — 92 Ω

e. 2 kΩ — 4 800 Ω

f. 0.88 kΩ — 750 Ω

g. 19 kΩ — 8 500 Ω — 0.36 kΩ

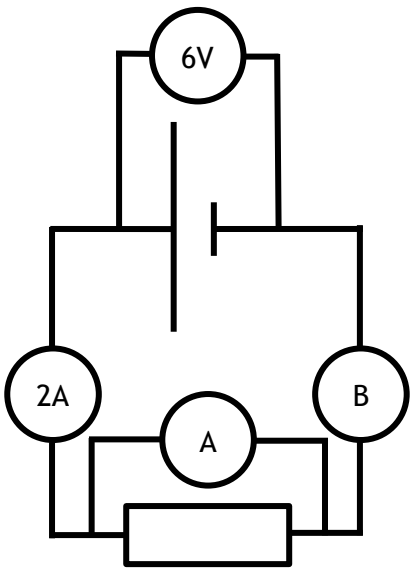
h. 0.2 kΩ — 3 000 Ω — 25.8 kΩ

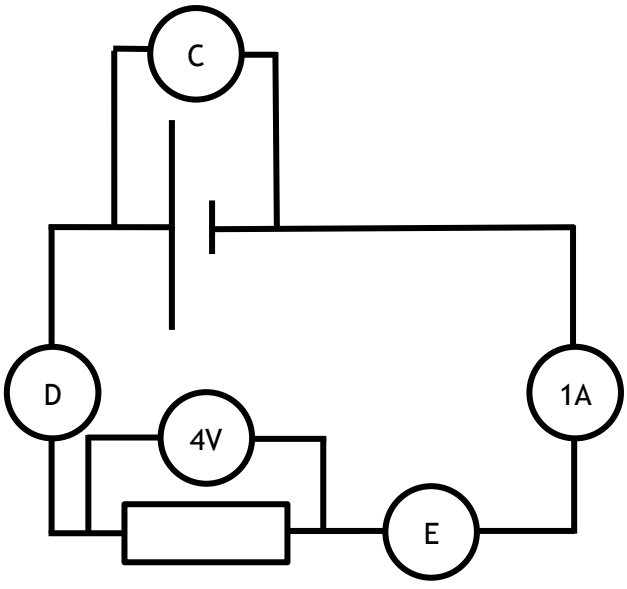
i. 6 kΩ — 3 200 Ω — 14.8 kΩ — 900 Ω

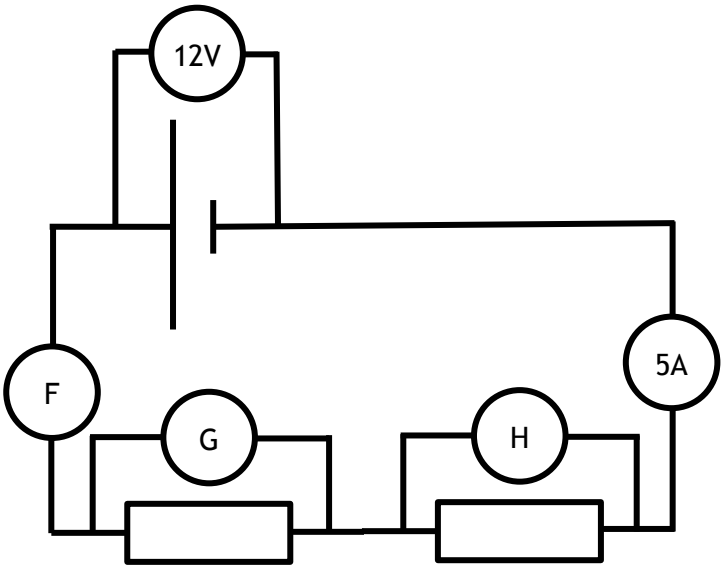
j. 15.5 kΩ — 620 Ω — 0.77 kΩ — 48 Ω

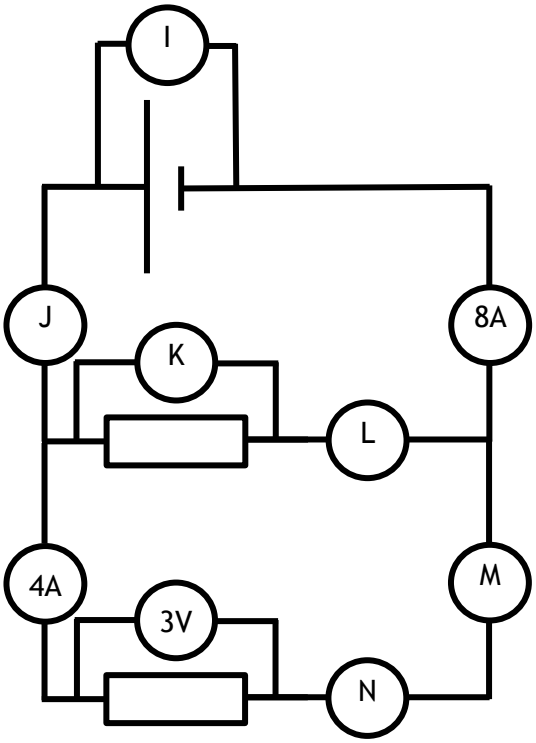
Task 2

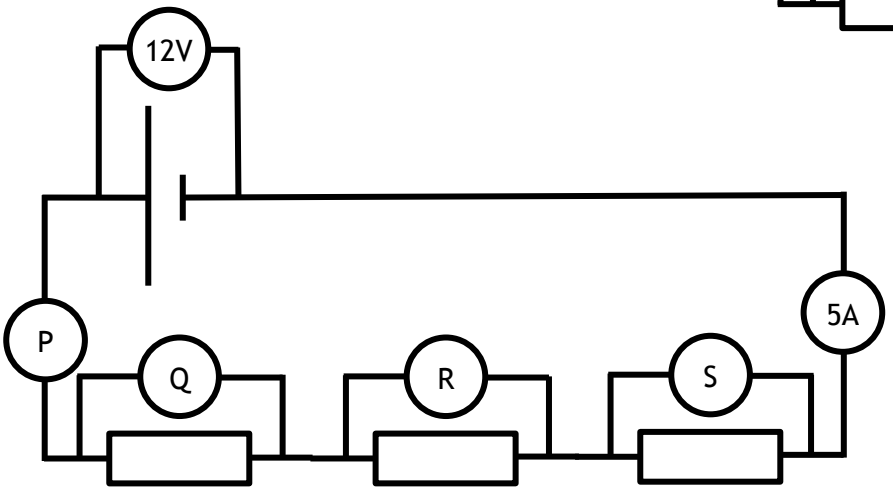
Look at these diagrams. Decide whether the meters A-Y are voltmeters or ammeters. What are the readings on each meter (include the units)?

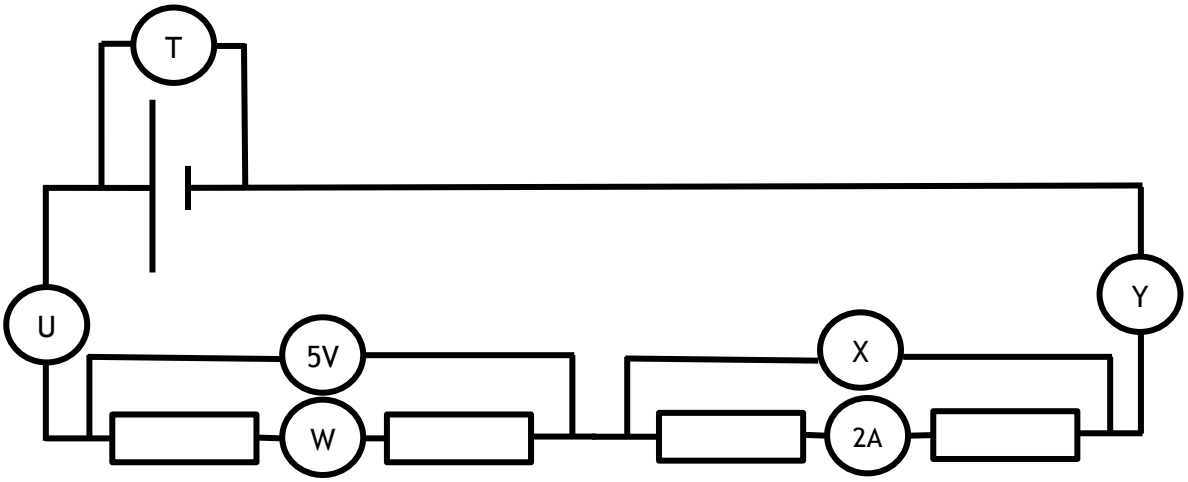





12V
F
G
H
5A


I
J
K
L
8A
4A
3V
M
N


12V
P
Q
R
S
5A


T
U
5V
W
X
2A
Y

Answers

1.

a. 24 Ω

b. 120 Ω

c. 620 Ω

d. 148 Ω

e. 6 800 Ω

f. 1 630 Ω

g. 27 860 Ω

h. 29 000 Ω

i. 24 900 Ω

j. 16 938 Ω

2.

A. Voltmeter 6 V

B. Ammeter 2 A

C. Voltmeter 4 V

D. Ammeter 1 A

E. Ammeter 1 A

F. Ammeter 5 A

G. Voltmeter 6 V

H. Voltmeter 6 V

I. Voltmeter 3 V

J. Ammeter 8 A

K. Voltmeter 3 V

L. Ammeter 4 A

M. Ammeter 4 A

N. Ammeter 4 A

O. -

P. Ammeter 5 A

Q. Voltmeter 4 V

R. Voltmeter 4 V

S. Voltmeter 4 V

T. Voltmeter 10 V

U. Ammeter 2 A

V. -

W. Ammeter 2 A

X. Voltmeter 5 V

Y. Ammeter 2 A