

Math 1015

Home work #1

Me	Friend 1	Friend 2	Friend 3	Friend 4	Friend 5	Friend 6	Friend 7
SDD	RC	Wa	RC	Wo	Wa	Wo	RC
Wo	Wo	SDD	SDD	SDD	SDD	Wa	Wo
Wa	Wa	Wo	Wa	RC	Wo	SDD	Wa
RC	SDD	RC	Wo	Wa	RC	RC	SDD

#1a plurality: SDD: 1
 RC: 3 → RC wins!
 Wa: 2
 Wo: 2

#1b RCV: Round 1 ~~SDD: 1~~
 RC: 3 SDD elim.
 Wa: 2
 Wo: 2

Round 2

Wo	RC	Wa	RC	Wo	Wa	Wo	RC
Wa	Wo	Wo	Wa	RC	Wo	Wa	Wo
RC	Wa	RC	Wo	Wa	RC	RC	Wa

RC: 3
 Wo: 3
~~Wa: 2~~

Wa eliminated.

Round 3

Wo	RC	Wo	RC	Wo	Wo	Wo	RC
RC	Wo	RC	Wo	RC	RC	RC	Wo

Wo: 5
 RC: 3

Woof wins!

#2

22%	23%	15%	29%	7%	4%
D	D	H	H	J	J
H	J	D	J	H	D
J	H	J	D	D	H

a Plurality:

D: $22+23 = 55$

H: $15+29 = 44$

J: $7+4 = 11$

D wins!

b RCV: Round 1

D: 45

H: 44

~~J: 11~~

J eliminated.

Round 2

<u>22</u>	<u>23</u>	<u>15</u>	<u>29</u>	<u>7</u>	<u>4</u>
D	D	H	H	H	D
H	H	D	D	D	H

D: $22+23+4 = 49$

H: $15+29+7 = 51$

H wins!

#3

Many possible answers, like:

<u>4</u>	<u>3</u>	<u>2</u>
A	B	C
B	C	B
C	A	A

Here, A wins plurality

RCV

Rd 1

A: 4

B: 3

~~C: 2~~

Rd 2

A: 4

B: 5

B wins RCV!

4

Something like:

10

A

B

C

D

10

B

C

D

A

10

C

D

A

B

10

D

A

B

C