

Problems in Voting: A soft note

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Who is the true winner?

from Bruce Bueno de Mesquita (via Marco Malvaldi)

18	12	10	9	4	2
a	b	e	c	d	d
c	d	b	e	b	e
d	c	d	d	c	c
e	e	c	b	e	b
b	a	a	a	a	a

Who is the true winner?

PLURALITY

18	12	10	9	4	2
a	b	e	c	d	d
c	d	b	e	b	e
d	c	d	d	c	c
e	e	c	b	e	b
b	a	a	a	a	a

The winner is **a**

Who is the true winner?

RUN-OFF

18	12	10	9	4	2
a	b	e	c	d	d
c	d	b	e	b	e
d	c	d	d	c	c
e	e	c	b	e	b
b	a	a	a	a	a

The winner is **b** (37-18)

Who is the true winner?

BORDA COUNT

18	12	10	9	4	2	
a	b	e	c	d	d	5
c	d	b	e	b	e	4
d	c	d	d	c	c	3
e	e	c	b	e	b	2
b	a	a	a	a	a	1

The winner is **c** ($5 \cdot 9 + 4 \cdot 18 + 3 \cdot 18 + 2 \cdot 10 = 191$)

Who is the true winner?

CONDORCET

18	12	10	9	4	2
a	b	e	c	d	d
c	d	b	e	b	e
d	c	d	d	c	c
e	e	c	b	e	b
b	a	a	a	a	a

Shortly **d**-a (37-18), **d**-b (33-22),
d-c (28-27), **d**-e (36-19)

The winner is **d**

Who is the true winner?

INSTANT RUN-OFF

18	12	10	9	4	2
a	b	e	c	d	d
c	d	b	e	b	e
d	c	d	d	c	c
e	e	c	b	e	b
b	a	a	a	a	a

The eliminated is **d**

Who is the true winner?

INSTANT RUN-OFF

18	12	10	9	4	2
a	b	e	c	b	e
c	c	b	e	c	c
e	e	c	b	e	b
b	a	a	a	a	a

The eliminated is c

Who is the true winner?

INSTANT RUN-OFF

18	12	10	9	4	2
a	b	e	e	b	e
e	e	b	b	e	b
b	a	a	a	a	a

The eliminated is **b**

Who is the true winner?

INSTANT RUN-OFF

18	12	10	9	4	2
a	e	e	e	e	e
e	a	a	a	a	a

The eliminated is **a**

The winner is **e**

To campaign or not to campaign?

from Remzi Sanver

27	24	42
a	b	c
b	c	a
c	a	b

Majority = 47

27	24	42
a	c	c
c	a	a

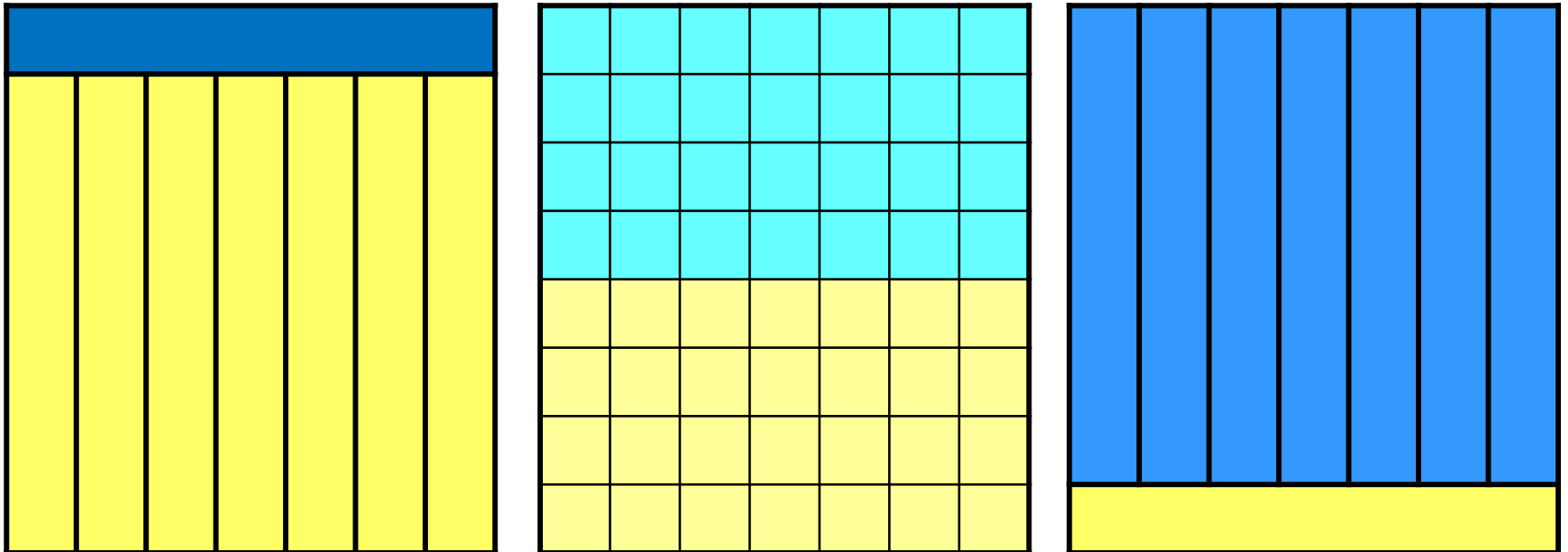
To campaign or not to campaign?

27	24	42
a	b	c
b	c	a
c	a	b

23	24	46
b	b	c
c	c	b

Gerrymandering

The word was created in reaction to a redrawing of Massachusetts state senate election districts under Governor Elbridge Gerry (1744–1814)



Thank you for your attention!