

- (1) d - all even edges
- (2) b
- (3) c
- (4) b
- (5) b - Add AB,BC or AE,EC
- (6) a
- (7) e
- (8) c - $A \rightarrow B \rightarrow C \rightarrow E \rightarrow D \rightarrow A$
- (9) a - Add AB(10), ED(11), EC(12), AC(14), BD(17)
- (10) c
- (11) d - $A \cap B = \{1, 13, 25\}$
- (12) e
- (13) b
- (14) d - 2^4
- (15) a
- (16) c
- (17) d
- (18) e
- (19) b
- (20) b
- (21) d
- (22) e
- (23) e
- (24) b - $9 \mid 1 + 2 + 4 + 4 + 7$
- (25) d - 7 total primes, 5 different
- (26) d
- (27) e
- (28) b
- (29) e
- (30) c - $A = 62, B=46, C=67, D=59$
- (31) c - Round 1: $A=8, B=10, C=9$ Eliminate A. Round 2: $B=13, C=14$. Eliminate B.
- (32) d - A vs B: A 1pt ($A > B$ 16, $B > A$ 15), A vs C: C 1pt, B vs C: B 1 pt. Each 1 pt
- (33) a
- (34) c
- (35) c
- (36) a
- (37) b
- (38) c
- (39) d
- (40) c - voter D is never critical