Quiz 5 Student Mistakes

Q1:

- Jumping into 2nd part without doing 1st part
  - Must parametrize with first 2 equations, and then again after including 3rd
  - If only 2nd, 2 points maximum. If only 1st, 3 points maximum.
- Algebraic mistakes
  - Solving with row reduction
    - not properly subtracting, missing entries
  - Solving with variable elimination
    - Making up equations, substituting incorrectly
- Parametrization
  - Not trying to parametrize -> lose most points
  - Skipping part 1 and only getting $w = 3$, $x = -1$ for part 2 -> at most 1 point

Q2

- Claiming possible with example
  - Only $AB \neq BA$: already did in class, 0.5 or 1 points
  - $AB = 0 = BA$: invalid, no points
  - $AB \neq 0 = BA$: half credit since you could just swap A and B
  - Other: varies, see me
- Claiming impossible
  - Used "If $AB = 0$, then $A = 0$ or $B = 0$," which is false
  - Claimed "$AB = BA$ if A, B defined," which is false
- In general
  - Talking about what dimensions A or B must have
    - Square/non-square: can have both
    - Must be 1xn, 1x1, 2x2 etc.: false, all of these work
    - Any impossibility argument based on dimensions fails
  - Reading not equal symbol '$\neq$' as equal symbol '$=$' or vice versa

Q3: True/false questions, so it's right or wrong. Nothing more to say without mind reading.