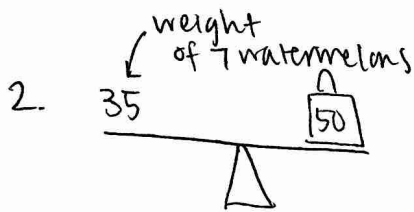
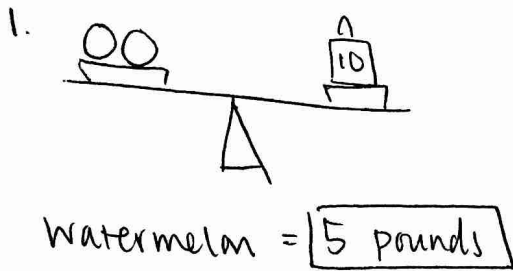


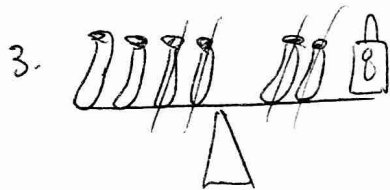
Meeting 2 Balance Scale (Advanced)



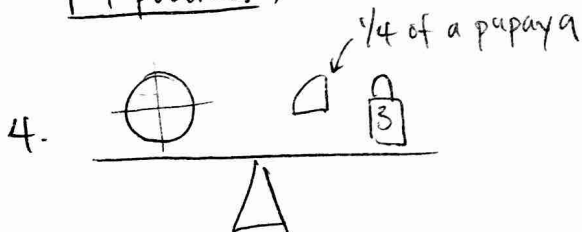
(a) no

(b) $50 - 35 = 15$

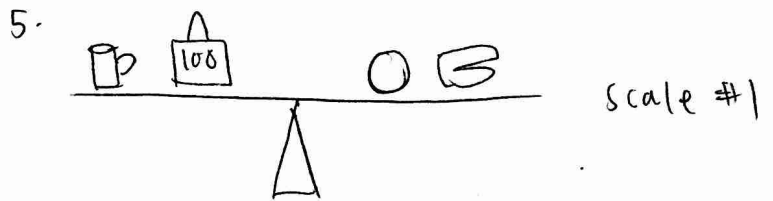
put 3 watermelons to balance



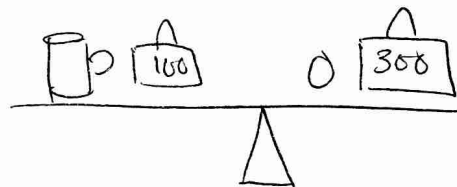
4 pounds



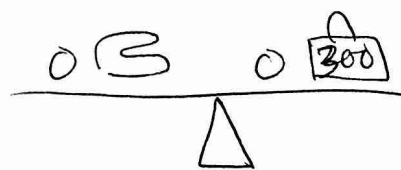
papaya = 4 pounds



Note that the first balance is just 100 grams more than the second scale. Add 100 g to both sides on the second scale:



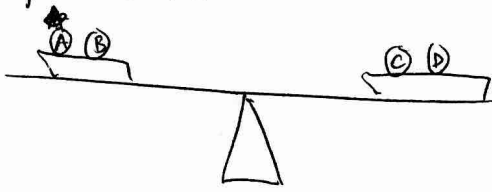
We know that a coffee and 100g also equals a tangerine and a stapler from scale #1. Thus,



And so the stapler is 300 grams.

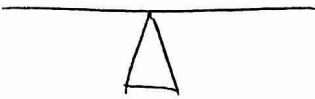
6. 5 coins ⊕ ⊕ ⊙ ⊕ ⊕

step #1: weigh 2 and 2



Outcome #1
(If same weight)

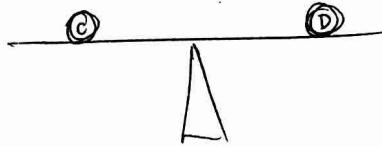
step #2



No step #2 -
already know it's
the 5th coin.

Outcome #2
(different weight)

ex.



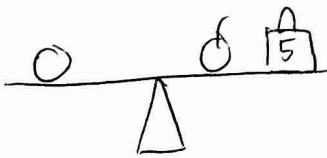
Take lighter 2 ^{coins} ~~with~~
and weigh ~~with 5th coin~~

→ If same, it is the
last ~~coin~~ (coin E)

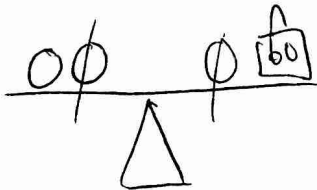
→ If different, it is
the lighter coin

∴ Need 2 tries to know for
sure.

7.



one apple weighs
60 grams



one tangerine
weighs 55 grams

Employ similar logic as Question #5.
Add ~~4~~ 1 gram to ~~the~~ Scale 1



Then, simplifying:



So Bird is 5 grams.

9. From last problem, bird is 5 grams.

From scale #4, rabbit is $5 + 5 = 10$ grams.

From scale #2, fox is $10 + 4 = 14$ grams

From scale #1, bear is $14 + 10 + 5 = 29$ grams.