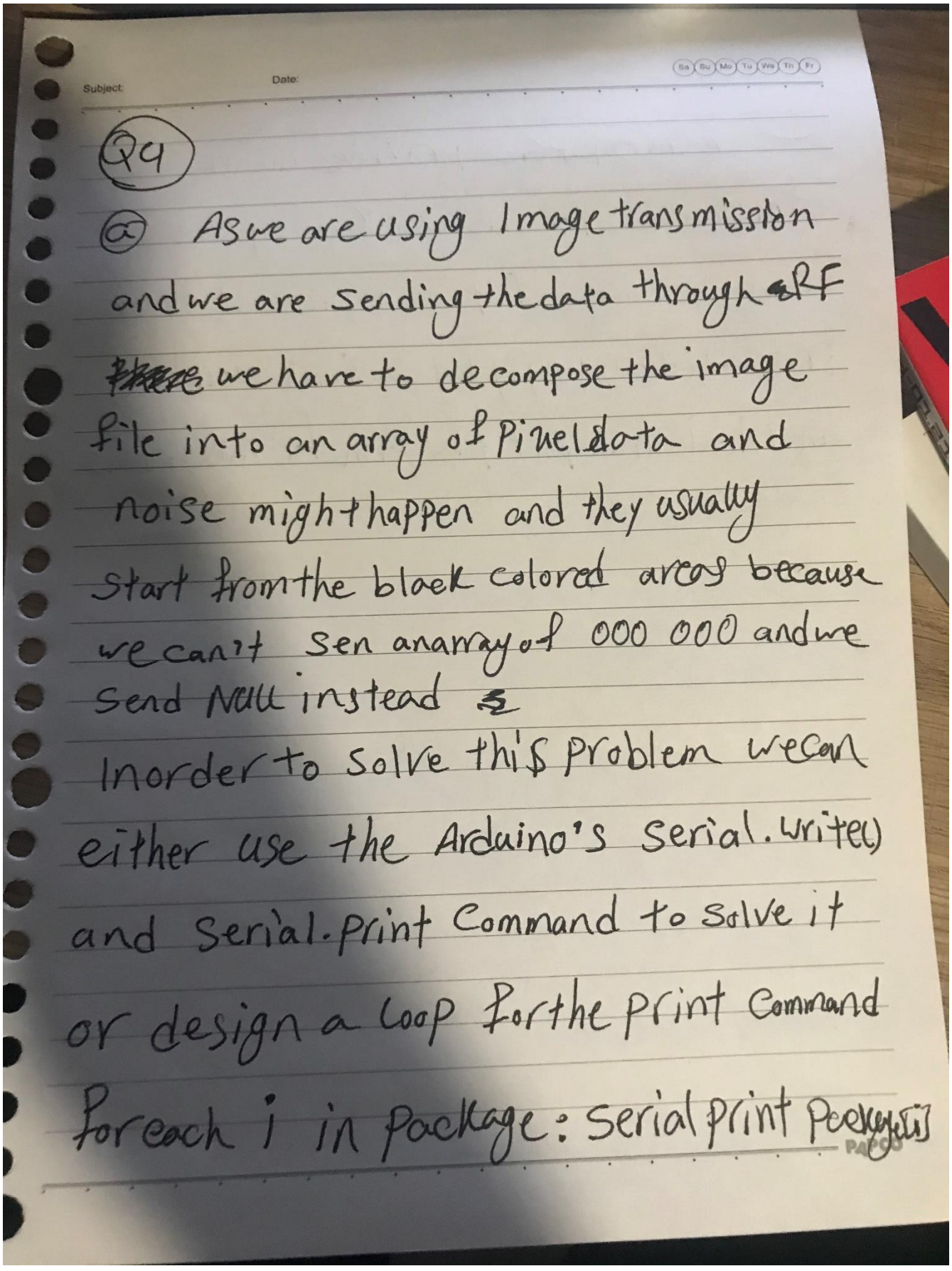
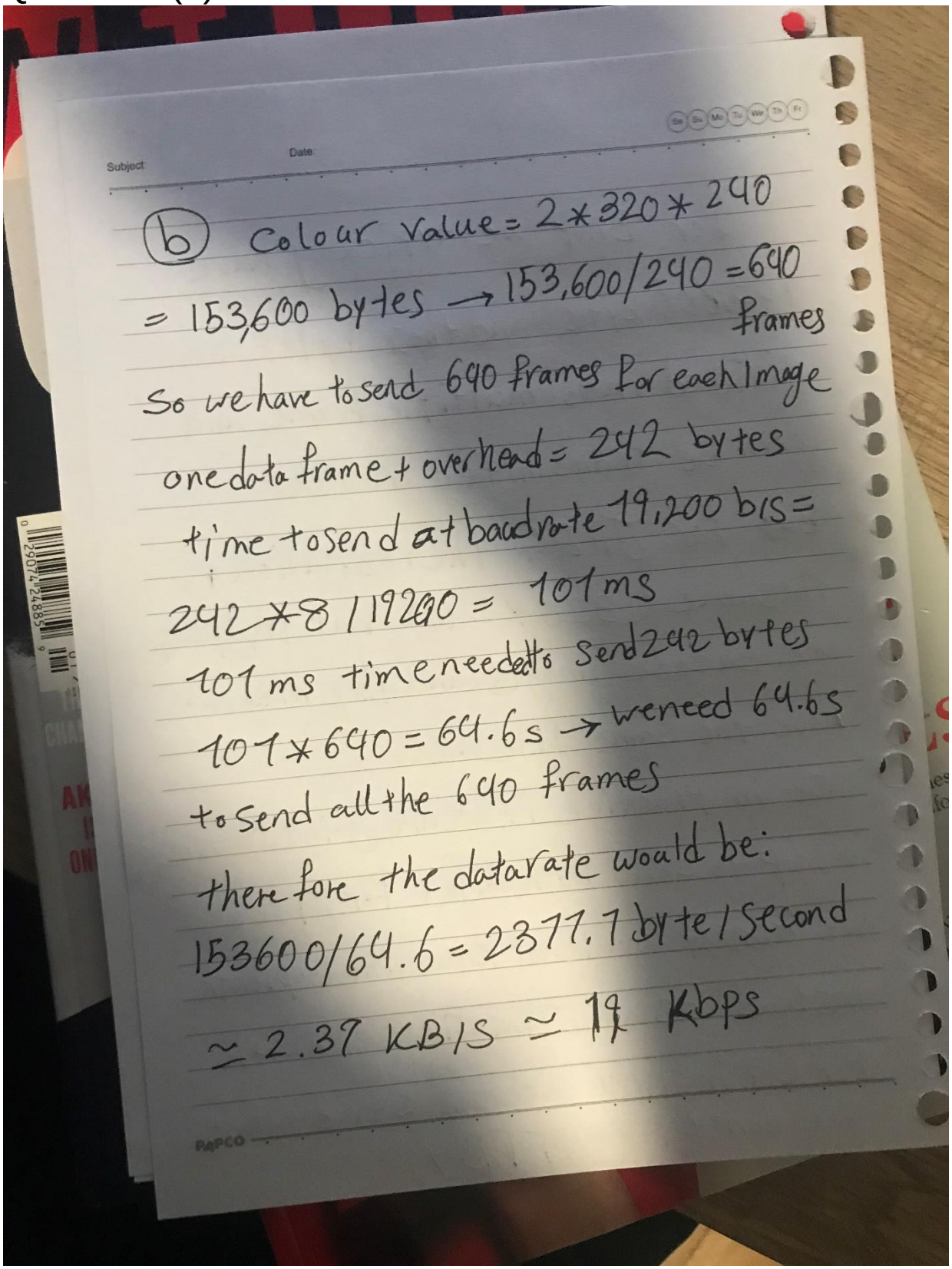
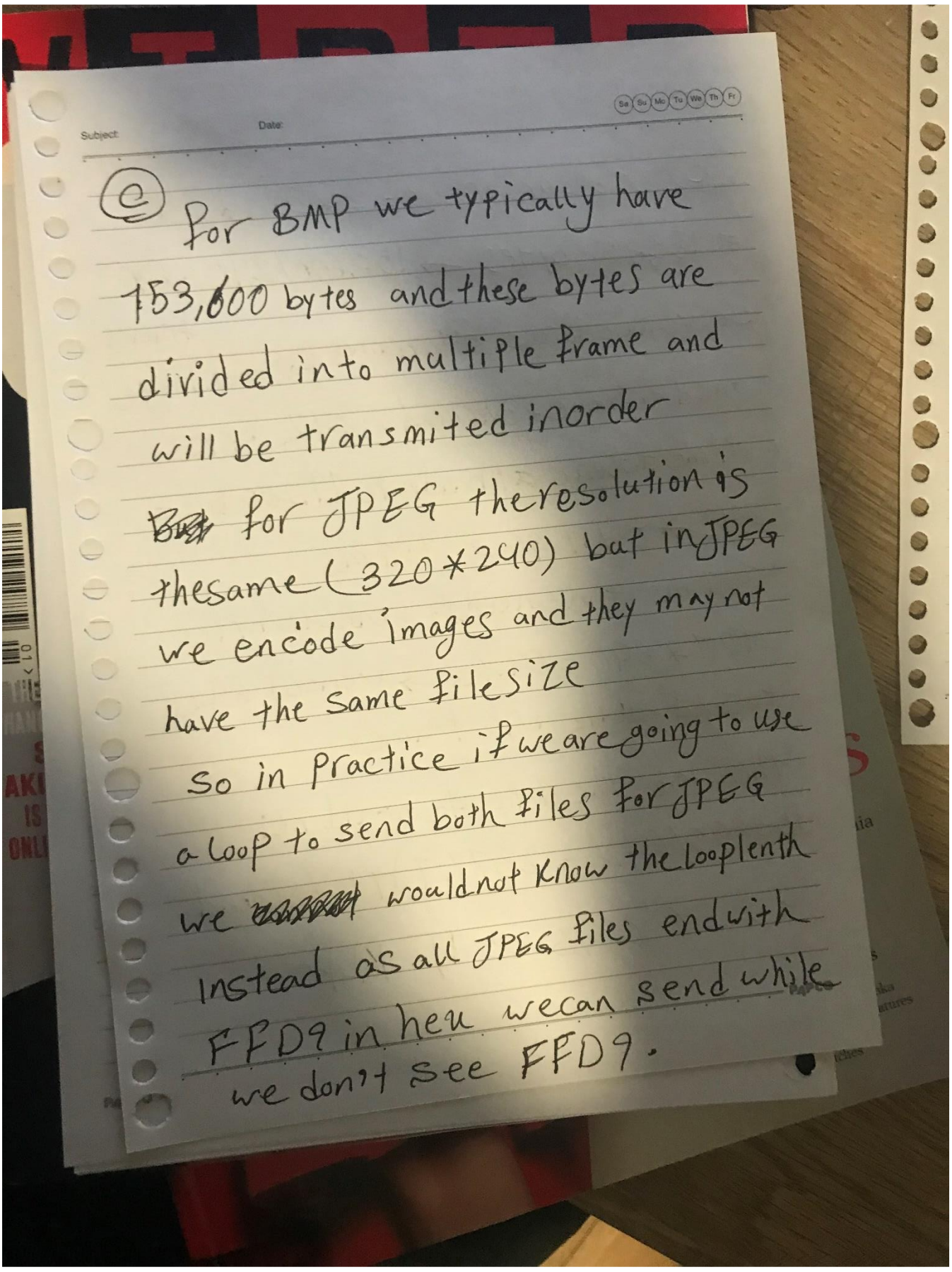
Qestion4: (a)


Subject:
Date:
Q4
(a) As we are using Image transmission and we are sending the data through RF we have to decompose the image file into an array of Pixel data and noise might happen and they usually start from the black colored areas because we can't sen an array of 000 000 and we send Null instead
Inorder to solve this problem we can either use the Arduino's Serial.write() and Serial.print Command to solve it or design a Loop for the print Command
Foreach i in Package: Serial print Package

Qestion4: (b)


Subject
Date
(b) Colour value = 2 * 320 * 240
= 153,600 bytes → 153,600/240 = 640 frames
So we have to send 640 frames for each Image
one data frame + overhead = 242 bytes
time to send at baud rate 19,200 b/s =
242 * 8 / 19200 = 101 ms
101 ms time needed to send 242 bytes
101 * 640 = 64.6 s → we need 64.6 s
to send all the 640 frames
therefore the data rate would be:
153600/64.6 = 2377.7 byte/second
≃ 2.37 KB/S ≃ 19 Kbps
PAPCO

Qestion4: (c)


Subject:
Date:
Se Su Mo Tu We Th Fr
(c) For BMP we typically have 153,600 bytes and these bytes are divided into multiple frame and will be transmited inorder for JPEG the resolution is thesame (320*240) but in JPEG we encode images and they may not have the same filesize
So in practice if we are going to use a loop to send both files for JPEG we wouldnot know the looplenth instead as all JPEG files endwith FFD9 in hex wecan send while we don't see FFD9.