

Answer to Question 1

From the image of question 1, we can see

$$\frac{7mm}{35mm} = \frac{z}{500mm}$$

so we can acquire that $z=100mm$. And for per line per mm we can find that $1024/100=10$ elements/mm

and to obtain the line pairs we divide by 2 so the resolution is **5 line pairs/mm**