



Part1

1.A

2.C

3.A

4.A

5.C

6.B

7.A

8.A

1. $(80 \times 4 + 50 + 20) / 4 = 97.5(\text{us})$

2.

(1) $(345 - 123) + (874 - 123) + (874 - 692) + (692 - 475) + (475 - 105) + (376 - 105) = 2013$

(2) $(376 - 345) + (475 - 376) + (692 - 475) + (874 - 692) + (874 - 123) + (123 - 105) = 1298$

(3) $(345 - 123) + (123 - 105) + (105 - 0) + (376 - 0) + (475 - 376) + (692 - 475) + (874 - 692) = 1219$

(4) $(345 - 123) + (123 - 105) + (376 - 105) + (475 - 376) + (692 - 475) + (874 - 692) = 1009$

(5) $(345 - 123) + (123 - 105) + (105 - 0) + (999 - 0) + (999 - 874) + (874 - 692) + (692 - 475) + (475 - 376) = 1967$

(6) $(345 - 123) + (123 - 105) + (874 - 105) + (874 - 692) + (692 - 475) + (475 - 376) = 1507$

Part2

1.A

2.B

3.D

4.B

5.C

1.(1) $2^{40} / 2^{10} = 2^{30}$ 个磁盘块, 需要至少 30 位进行索引, 所以块号最少占用 4 字节;
 $512 / 4 = 128$, 最大文件长度为 $128 \times 1\text{KB} = 128\text{KB}$

(2)最大文件长度为 $(2^{16} + 504/6) \times 1\text{KB} = 65620\text{KB}$

起始块号和块数均占 4 字节，这样可用块数为 2^{32} 块，单个文件长度为最大容量 4TB

2.(1) $10 \times 4\text{KB} = 40\text{KB}$

(2) $(10 + 1024 + 1024^2 + 1024^3) \times 4\text{KB} = 4.00\text{TB}$

(3)1

(4)3