

4) a) 4, 10, 8, 7, 5

4

$4 < x < 10$

$4 < x < 8$

$4 < x < 7$

$4 < 8 < 10 \checkmark$

$4 < 7 < 8 \checkmark$

$4 < 5 < 7 \checkmark$

Possible sequence of keys
examined

b) 13, 98, 28, 94, 33, 85, 48, 77, 51, 62, 55

$13 < x < 98$

$28 < x < 98$

$28 < x < 94$

$33 < x < 85$

$48 < x < 77$

$51 < x < 77$

$51 < x < 62$

$51 < 55 < 62 \checkmark$

Possible sequence of keys
examined

c) 10, 9, 8, 7, 6, 5

$x < 10$

$x < 9$

$x < 8$

$x < 7$

$x < 6$

$5 < 6 \checkmark$

Possible sequence of keys examined

d) 67, 24, 74, 55, 48

$x < 67$

$24 < x < 67$

$24 < 74 < 67 \times$

Not a possible sequence of keys
examined because it would require
the search zone getting bigger.

e) 78, 105, 99, 67, 82, 102

$78 < x$

$78 < x < 105$

$78 < x < 99$

$78 < 67 < 99 \times$

Not a possible sequence of keys
examined because it would require
the search zone getting bigger not smaller