1 Write 53 400 000 in standard form.

Answer 5.34×10^8 [1]

---

2 A doctor starts work at 20 40 and finishes work at 06 10 the next day.

How long is the doctor at work?
Give your answer in hours and minutes.

06:10 + 24h → 30:10 → 29:70
20:40 − 20:40 − 20:40 −
9:30
= 9 hours 30 minutes

Answer 9 h 30 min [1]

---

3 $81^x = 3$

Find the value of x.

$81^x = 3$
$(3^4)^x = 3^1$
$3^{4x} = 3^1$
$4x = 1$
$x = \frac{1}{4}$

Answer $x =$ $\frac{1}{4}$ [1]

---

4 7 9 20 3 9

(a) A number is removed from this list and the median and range do not change.

Write down this number.

3 7 9 9 20 → Remove 7 → 3 9 9 20

Me = 9
Range = 20 − 3 = 17

Me = $\frac{9+9}{2} = 9$
Range = 20 − 3 = 17

Answer(a) 7 [1]

(b) An extra number is included in the original list and the mode does not change.

Write down a possible value for this number.

Answer(b) 9 [1]
