10   John and Jake think a dice is biased.

Relative Frequency just means Experimental Probability

They both roll the dice a number of times.
The table below shows the results of their trials.

|	Number of trials	Number of sixes	Relative frequency
John	60	13	$\frac{13}{60} = 0.22$
Jake	150	44	$\frac{44}{150} = 0.29$

(a) Calculate the relative frequencies, to 2 decimal places, for each boy and
     complete the table.   [2]

(b) Explain why Jake's relative frequency gives a more reliable estimate of
     the likelihood of rolling a six.

The more times you do the experiment the more reliable estimate
More times is better estimate

Answer_____ [1]

9.   A calculator displays a number in standard form.
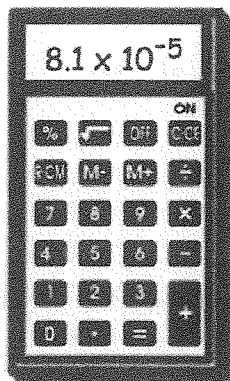
8.1×10^{-5}

$? \times 10^{n}$

8.1×10^{-5}

This -5 means it is a small number

.0 0 0 0 8.1

Jump the decimal point 5 times

Write the number as an ordinary number.

0.000081
....
(1)

The equation

$$x^3 + 2x = 50$$
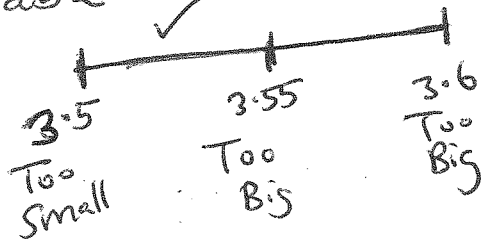
has a solution between 3 and 4.

Guess & Check

Use trial and improvement to find this solution.
Give your answer correct to 1 decimal place.
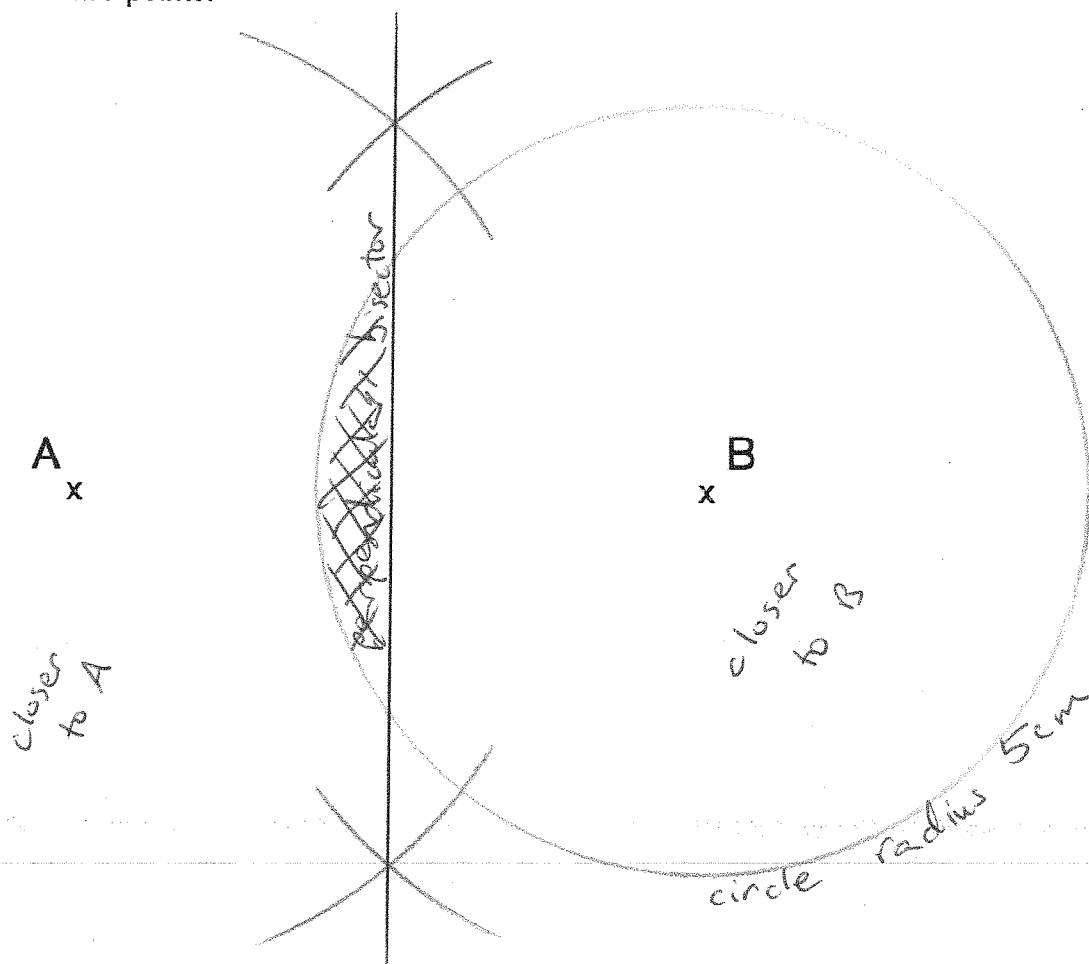You must show all your working.

Make a table ✓

x	$x^3 + 2x$	TB/TS
3	$3^3 + 2 \times 3 = 33$	Too Small
3.5	$3.5^3 + 2 \times 3.5 = 49.875$	Too Small
3.6	$3.6^3 + 2 \times 3.6 = 53.856$	Too Big
3.55	$3.55^3 + 2 \times 3.55 = 51.84$	Too Big

3.5 ————— 3.55 ————— 3.6
Too Small — Too Big — Too Big

Ans 3.5

A and B are two points.

Shade the region which contains those points which are both closer to A than to B, and less than 5cm from B.

(2)