1 By rounding each number to the nearest 10, estimate the value of 262 ÷ 19.8

[2 marks]

262 → 260 , 19.8 → 20 (1)

260 ÷ 20 = 13

Answer 13 (1)

2 Millie is estimating the value of $\dfrac{1}{\left(\sqrt[3]{8.34}\right)^2 \times 10.21}$

She rounds each decimal number to 1 significant figure.

2 (a) Work out Millie's estimate.

You **must** show your working.

[2 marks]

$\dfrac{1}{(\sqrt[3]{8})^2 \times 10} = \dfrac{1}{2^2 \times 10} = \dfrac{1}{40}$

(1) (1)

Answer $\dfrac{1}{40}$

2 (b) Millie says,

"My estimate must be more than the exact value."

Without working out the exact value, give a reason how she can know this.

[1 mark]

Both numbers are rounded down.

(1)

3 Archie flips a biased coin 200 times.

Here is some information about the outcomes after each 50 flips.

Total number of flips	50	100	150	200
Number of heads	10	27	37	52

Work out the best estimate for the probability of flipping a head.

Give a reason for your answer.

[2 marks]

Answer $\frac{52}{200}$ ✓1

Reason largest number of flips give the best estimation ✓1