1 Work out.

(a) $\sqrt{81}$

(a) .....[1]

(b) 4^3

(b) .....[1]

[2]

2 (a) Here is a rule to get from one term of a sequence to the next term.

Multiply by 2

The first term is 1.

Calculate the fourth term of this sequence.

(a) .....[2]

(b) The n^{th} term of another sequence is $10n + 4$.

Write down the first two terms of this sequence.

(b) ....., ...[2]

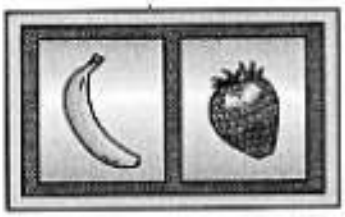
(c) Write down a number which is in both sequences.
Show your working.

(c) .....[2]

[6]

[Turn over

3 A machine has two rotating drums.
The first drum has four fruit symbols, apple (A), banana (B), melon (M) and strawberry (S).
The second drum has three fruit symbols, apple (A), peach (P) and strawberry (S).



(a) Complete the table below to show all the possible pairs of fruit symbols when the drums stop.
The first two have been done for you.

You may not need to use all the lines.

First drum	Second drum
A	A
A	P

[2]

(b) Each pair of symbols is equally likely.

What is the probability of getting a pair of matching symbols?

(b).....[1]

3

4 Solve.

(a) $\frac{x}{2} = 7$

(a) .....[1]

(b) $12 = 5x$

(b) .....[1]

(c) $2x - 1 = 8$

(c) .....[2]

[4]

5 (a) Write 15% as a decimal.

(a) .....[1]

(b) Four of these fractions are equivalent to each other.

$$\frac{30}{40} \quad \frac{45}{60} \quad \frac{18}{24} \quad \frac{24}{30} \quad \frac{15}{20}$$

Which fraction is the odd one out?
Show how you decide.

(b) .....[2]

(c) Work out.

(i) $\frac{5}{17} + \frac{1}{17}$

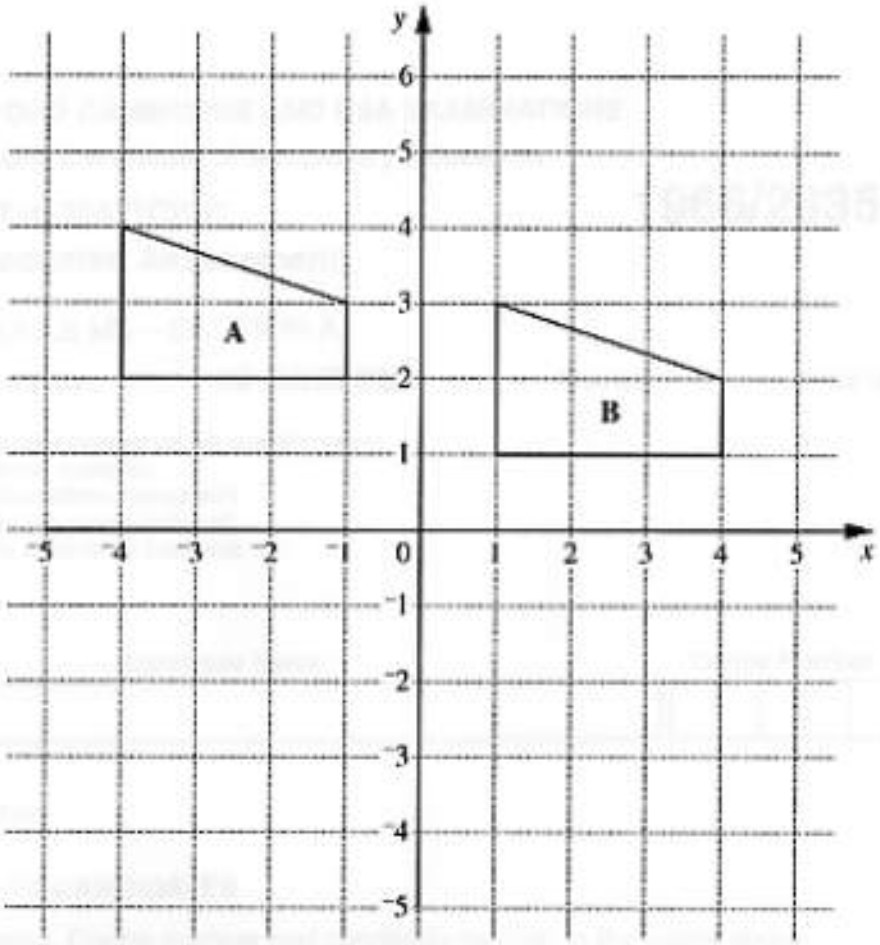
(c)(i) .....[1]

(ii) $\frac{7}{8} - \frac{1}{4}$

(ii) .....[2]

6

6



(a) Describe the translation which moves shape **A** to shape **B**.

.....[1]

(b) Rotate shape **A** half a turn about the origin.
Label the image **C**. [3]

4