$$\frac{1}{2} \quad \frac{2}{3} \quad \frac{12}{16} \quad \frac{4}{8}$$

$$\frac{6}{16} \quad \frac{2}{12} \quad \frac{4}{10}$$

$$\frac{1}{6} \quad \frac{3}{4} \quad \frac{2}{5}$$

$$\frac{3}{8} \quad \frac{6}{9} \quad \frac{3}{10}$$
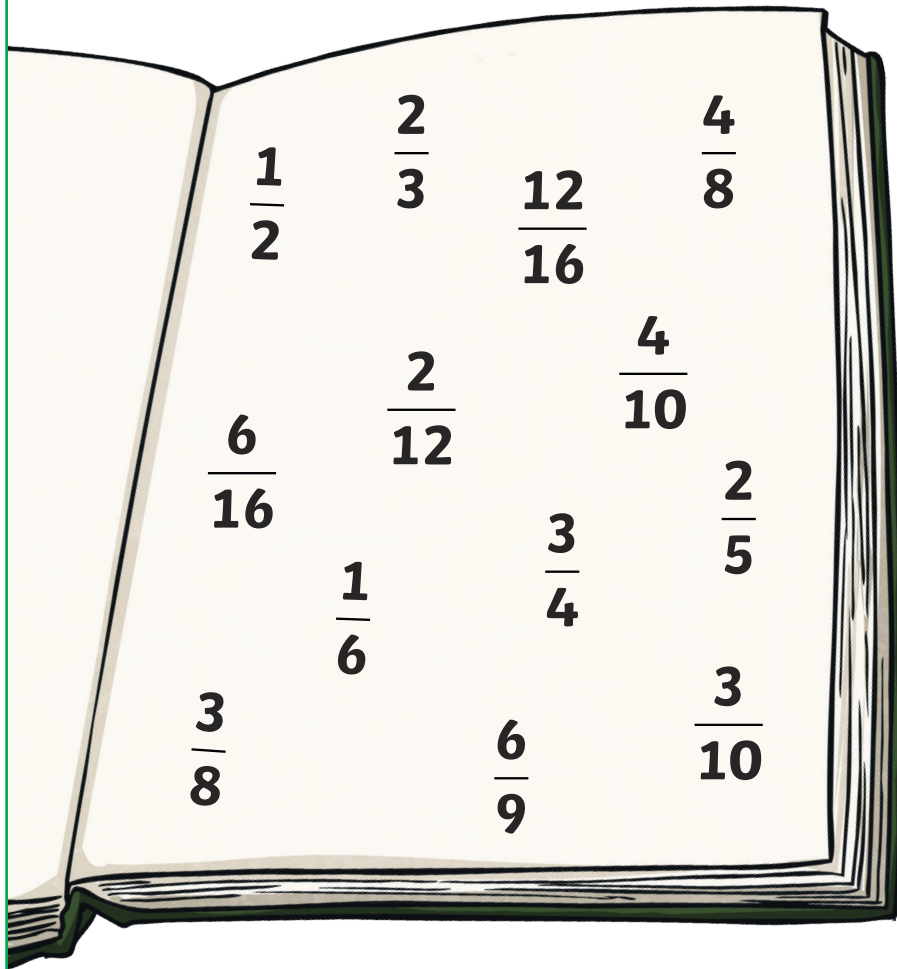
A book on fractions provides the first clue. A page in the book contains some fractions. There are a number of pairs of equivalent fractions and one fraction will be left over.

The numerator in the fraction left over provides the first clue.
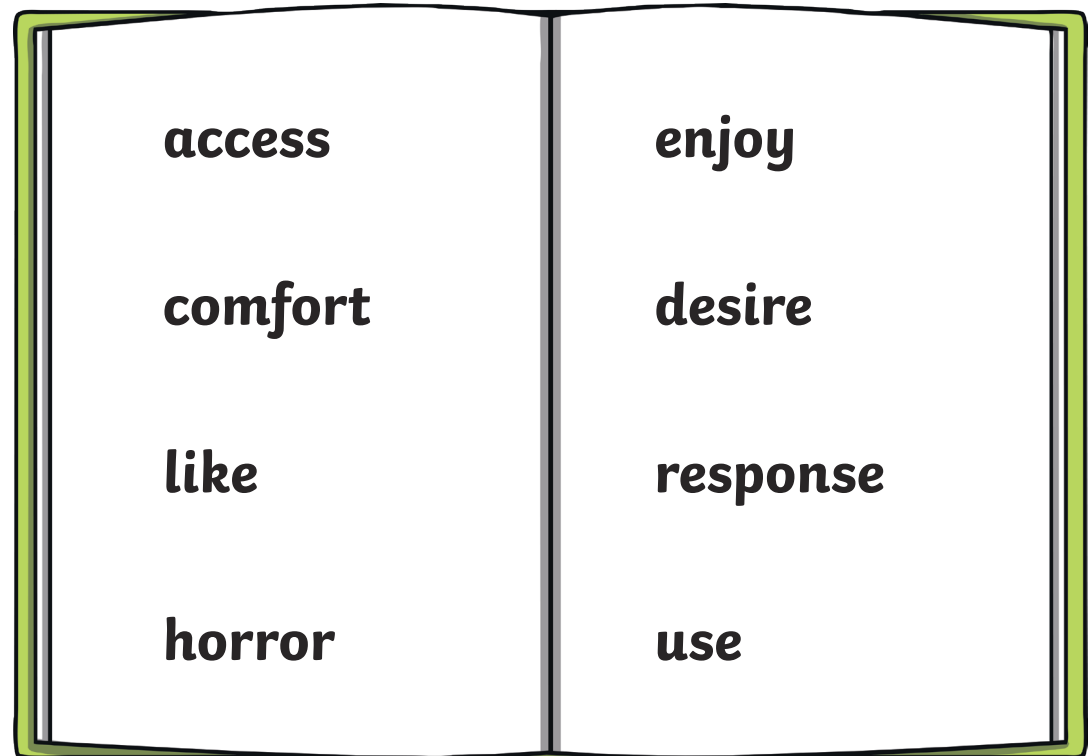
This is the **first** digit you need to unlock the door.

In a dictionary, a set of verbs are listed. Convert each word using the suffix **–able** or **–ible.** The number of words using the suffix **–able** provides the second clue.

-able

-ible

access

comfort

like

horror

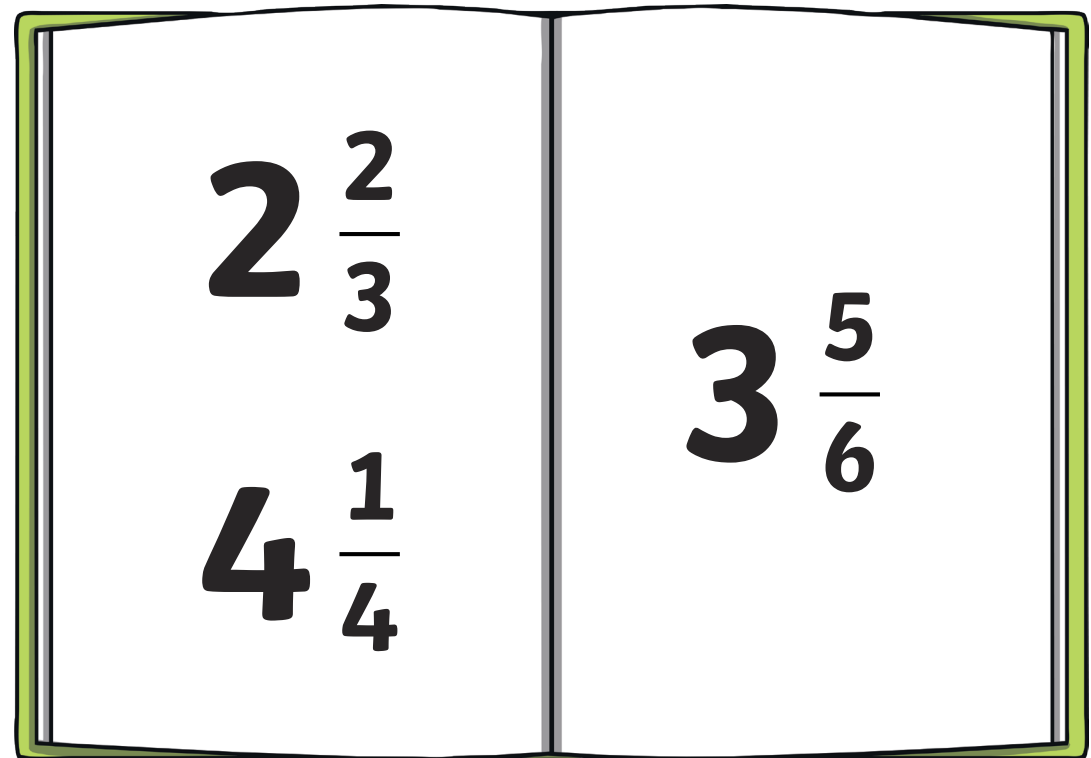enjoy

desire

response

use

This is the **second** digit you need to unlock the door.

A second page in the book on fractions gives the third clue:

There are some mixed numbers. To find the required digit, convert the mixed numbers to improper fractions, convert to equivalent fractions with the same denominator, add together and convert back to a mixed number.
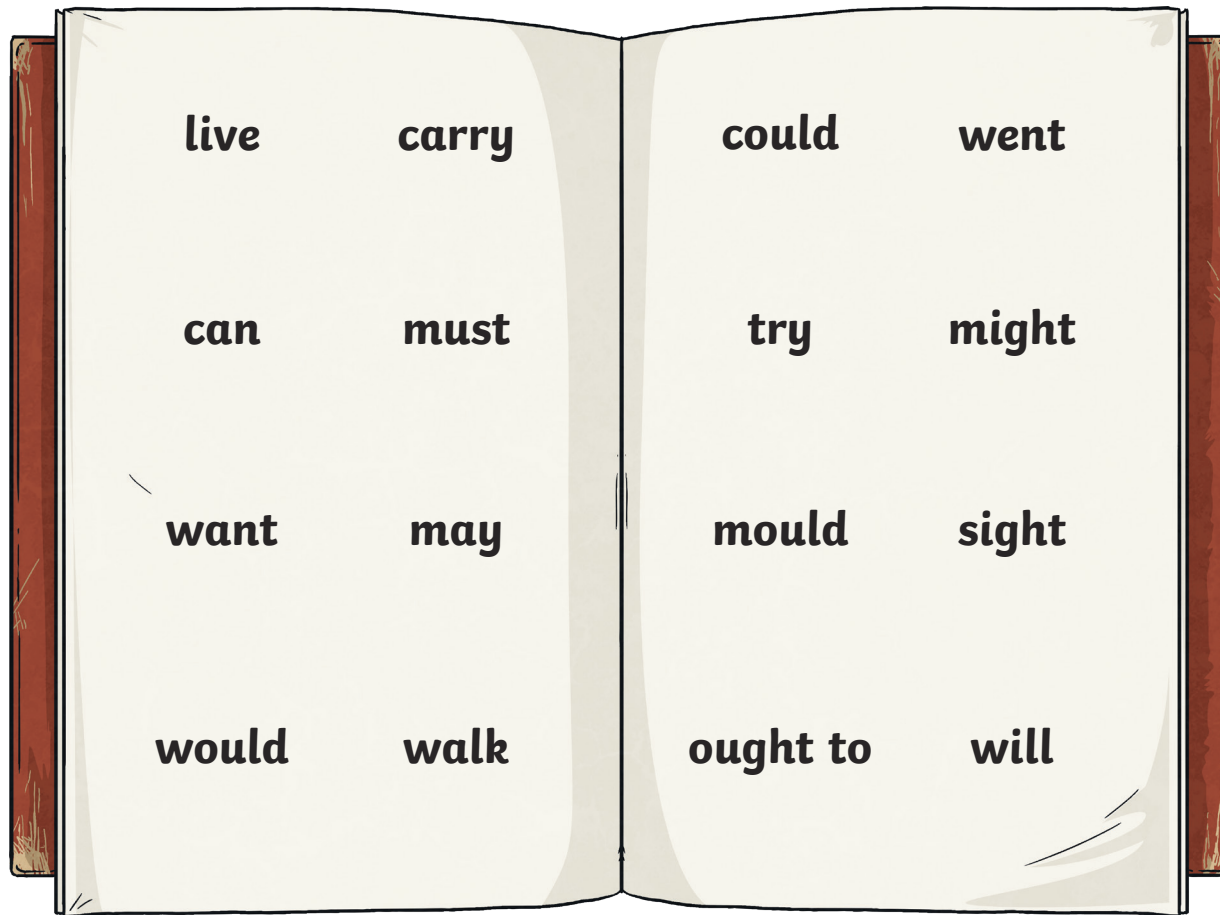
The digit that appears in the ones place of the whole number gives the third clue.

$$2\frac{2}{3}$$

$$4\frac{1}{4}$$

$$3\frac{5}{6}$$

This is the **third** digit you need to unlock the door.

live	carry
can	must
want	may
would	walk

could	went
try	might
mould	sight
ought to	will

A grammar book provides the fourth clue.

How many of the following words are modal verbs?

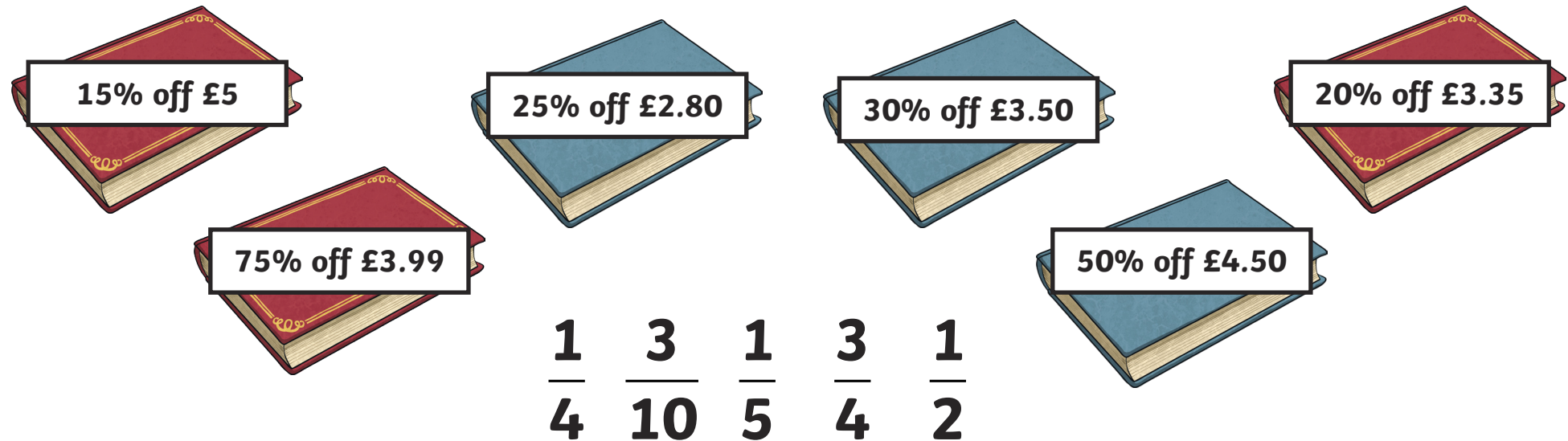This is the **fourth** digit you need to unlock the door.

The library has a shelf of books that have been purchased at a discount. Alongside is a set of fractions. Match the percentage discounts to the fractions. One percentage has no matching fraction.

15% off £5

75% off £3.99

25% off £2.80

30% off £3.50
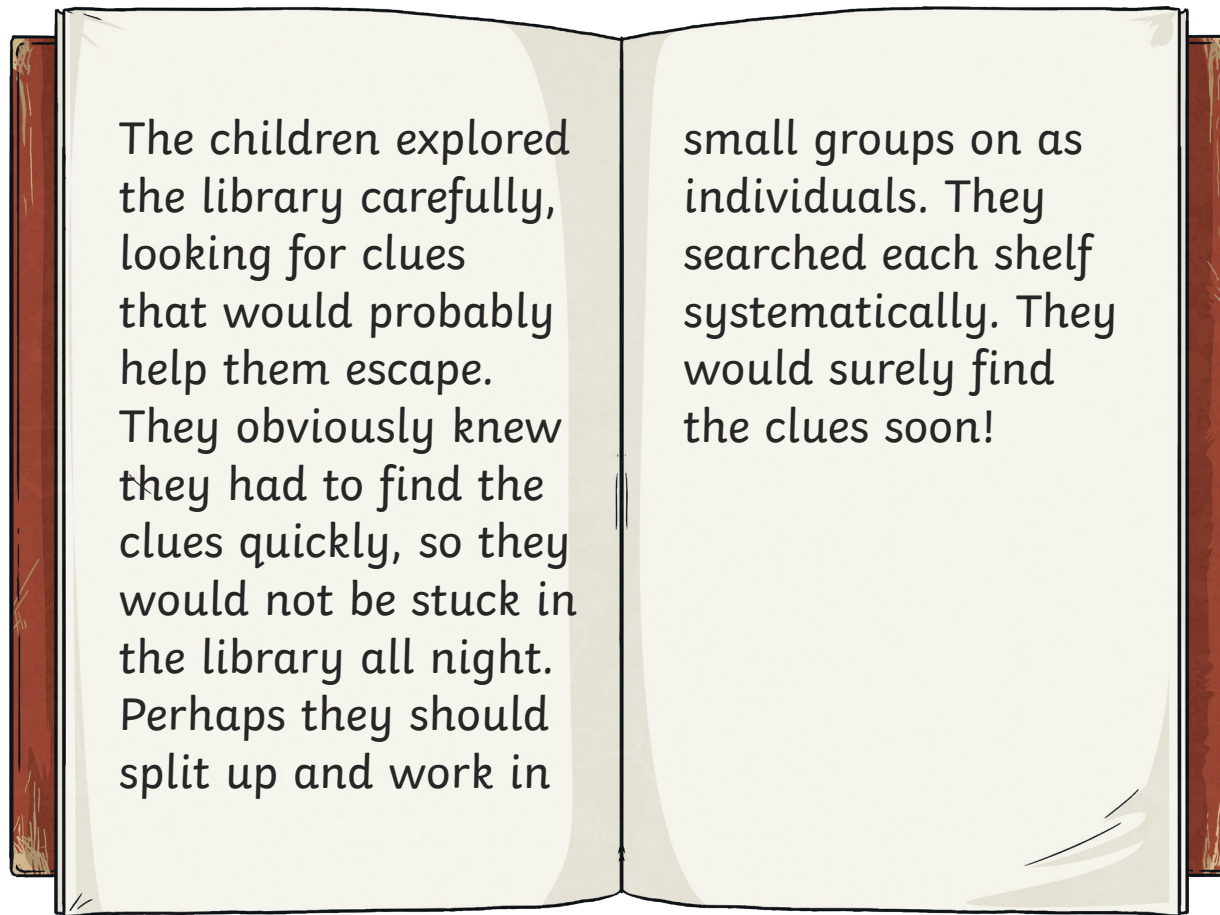
20% off £3.35

50% off £4.50

$$\frac{1}{4} \quad \frac{3}{10} \quad \frac{1}{5} \quad \frac{3}{4} \quad \frac{1}{2}$$

Find the digit in the tens place of the percentage with no matching fraction.

This is the **fifth** digit you need to unlock the door.

The children explored the library carefully, looking for clues that would probably help them escape. They obviously knew they had to find the clues quickly, so they would not be stuck in the library all night. Perhaps they should split up and work in small groups on as individuals. They searched each shelf systematically. They would surely find the clues soon!

The sixth clue is in an adventure story. How many adverbs of possibility are in this paragraph?

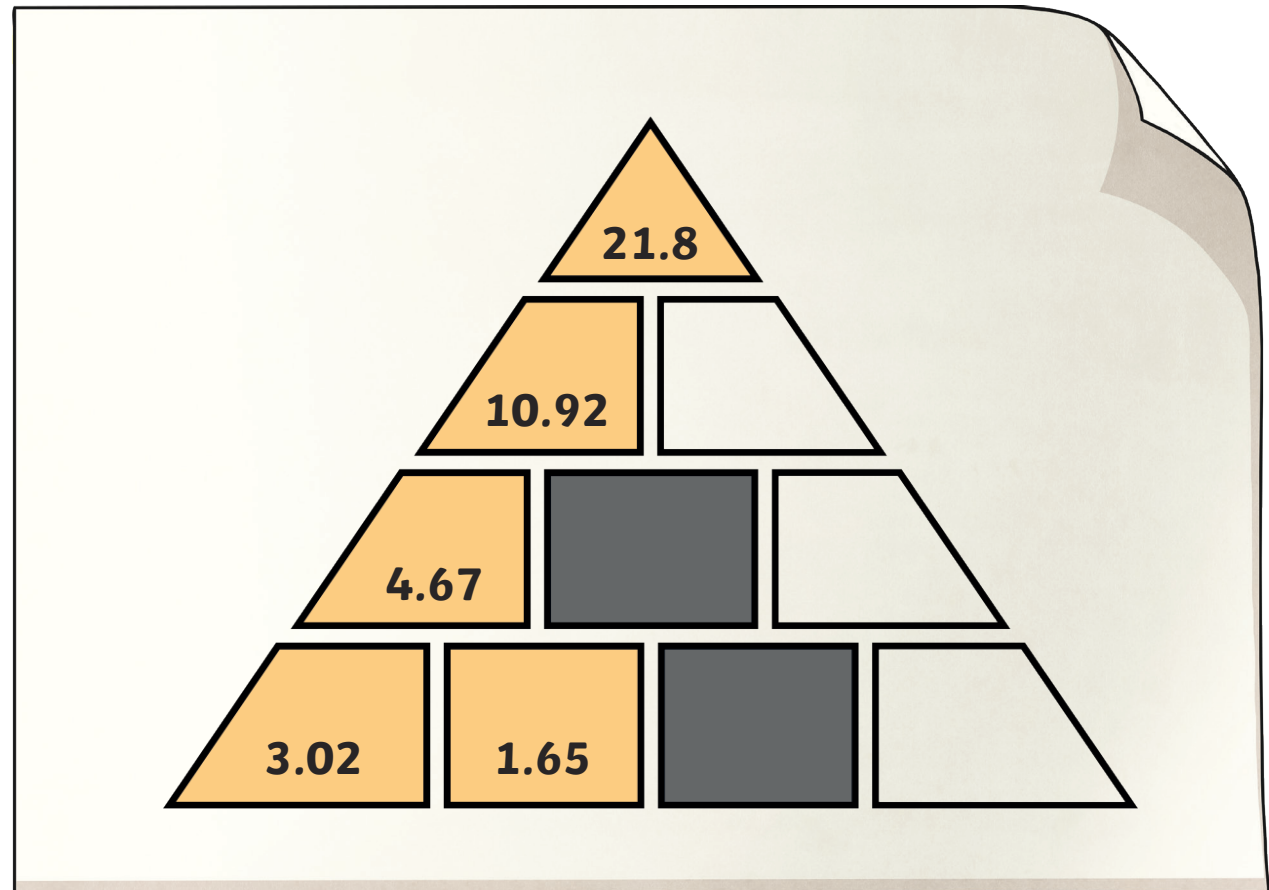**The number of adverbs of possibility is the sixth clue.**

This is the **sixth** digit you need to unlock the door.

Clue number 7 is found on a poster in the library, which shows a pyramid with the following numbers. Look at the relationship between the three decimal fractions in the bottom left hand corner, and use that to complete the pyramid.

Find the common digit in the shaded boxes for the seventh clue.

21.8

10.92

4.67

3.02 **1.65**

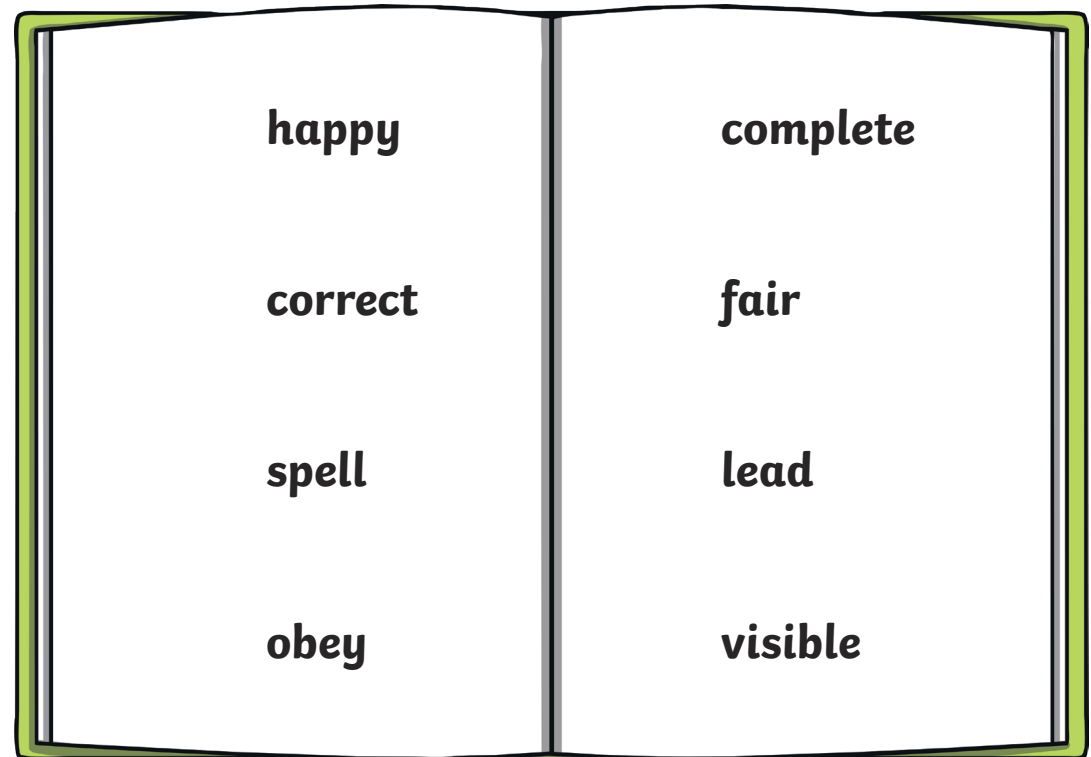This is the **seventh** digit you need to unlock the door.

Clue number 8 is found in a notebook which has a set of words and a set of prefixes.

Match each word to the correct prefix:

un-   in-   dis-   mis-

Add the number of words using the prefix un- and in- and subtract the number of words using the dis- prefix.
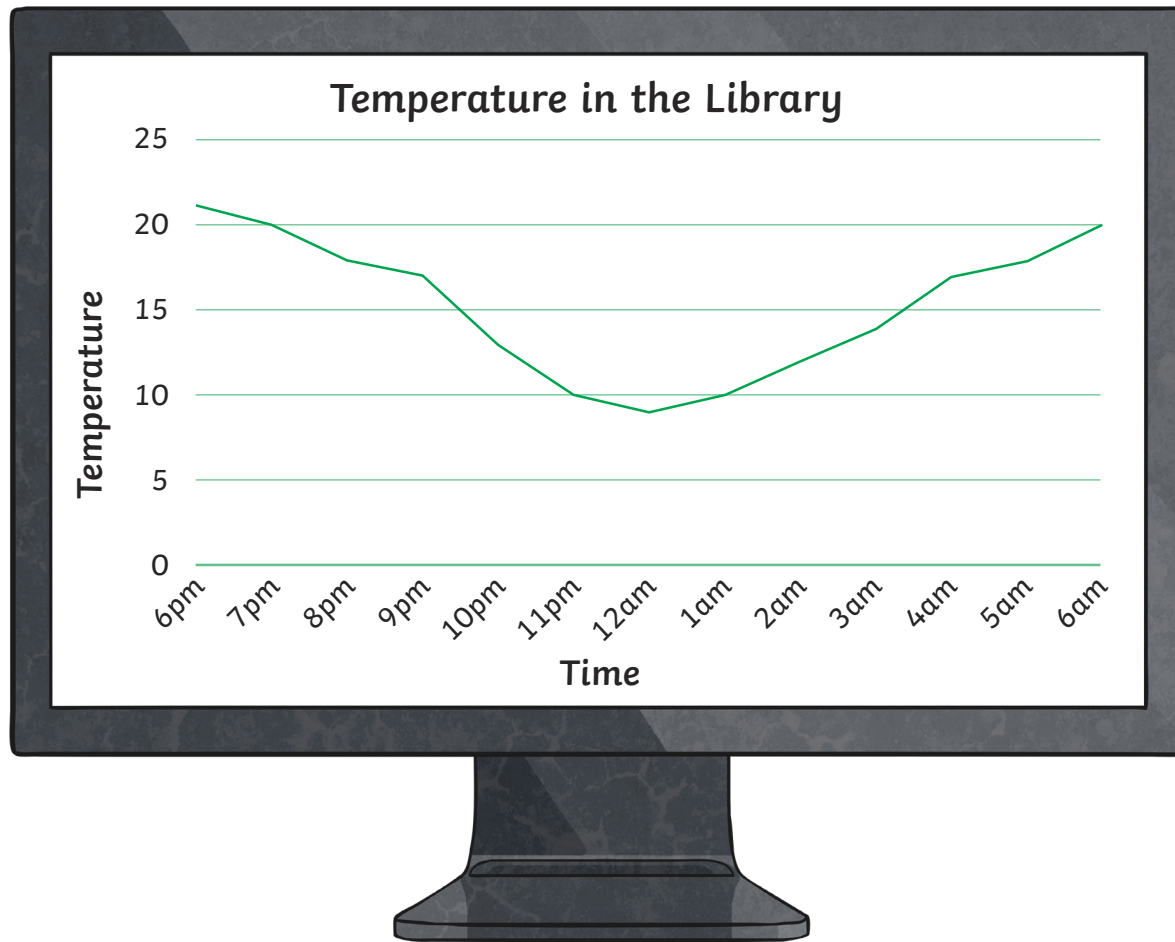
The answer gives the eighth clue.

happy

correct

spell

obey

complete

fair

lead

visible

This is the **eighth** digit you need to unlock the door.

Temperature in the Library

The ninth clue appears on a computer screen, which shows a line graph. The chart shows the temperature in the library overnight.

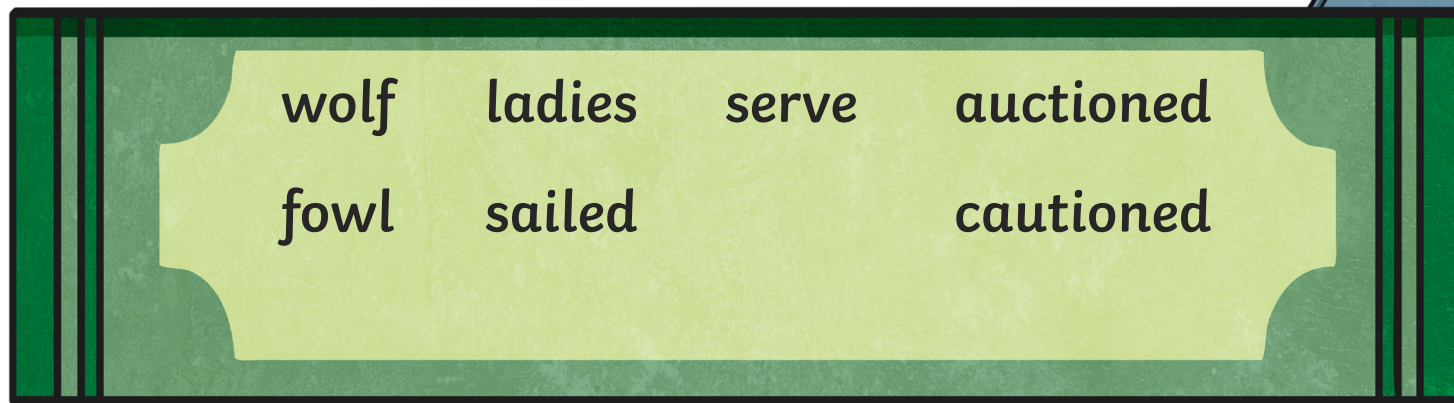**Find the number of hours between the two times when the temperature was 17°C.**

This is the **ninth** digit you need to unlock the door.

The final clue is found on a bookmark with a list of anagrams. (Anagrams are words where the letters are mixed up, usually to make a new word or words.)

Solve these anagrams. The first letter of each answer gives the last number.

wolf	ladies	serve	auctioned
fowl	sailed		cautioned

This is the **tenth** digit you need to unlock the door.