



Percentage Word Problems

I can solve problems which require knowing percentage and decimal equivalents.



There are 30 pairs of scissors.
60% of them are right-handed scissors.
30% of them are left-handed scissors.
The remaining scissors are for cutting wavy lines.
How many pairs of scissors are for cutting wavy lines?

36% of the books in the library are non-fiction.
39% of the books in the library are fiction.
The rest of the books are dictionaries.
What fraction of the books are dictionaries?



In Year 5, there are 60 children.
 $\frac{2}{5}$ of them have brown hair.
10% have ginger hair.
0.25 of them have black hair.
The rest have blonde hair.
How many children in Year 5 have blonde hair?

There are 28 PE kits in the cloakroom.
50% of the PE kits include red shorts.
0.25 of the PE kits include blue shorts.
The rest of the PE kits include green shorts.
How many PE kits include green shorts?



Percentage Word Problems Answers

I can solve problems which require knowing percentage and decimal equivalents.



There are 30 pairs of scissors.

60% of them are right-handed scissors.

30% of them are left-handed scissors.

The remaining scissors are for cutting wavy lines.

How many pairs of scissors are for cutting wavy lines?

18 right-handed scissors.

9 left-handed scissors.

$$18 + 9 = 27$$

$$30 - 27 = 3$$

3 pairs of scissors are for cutting wavy lines.

36% of the books in the library are non-fiction.

39% of the books in the library are fiction.

The rest of the books are dictionaries.

What fraction of the books are dictionaries?

$$36\% + 39\% = 75\%$$

$$100\% - 75\% = 25\%$$

$$25\% = \frac{25}{100} \text{ or } \frac{1}{4}$$

$\frac{1}{4}$ of the books are dictionaries.

In Year 5, there are 60 children.

$\frac{2}{5}$ of them have brown hair.

10% have ginger hair.

0.25 of them have black hair.

The rest have blonde hair.

How many children in Year 5 have blonde hair?

24 children have brown hair. 6 children have ginger hair. 15 children have black hair.

$$24 + 6 + 15 = 45$$

$$60 - 45 = 15$$

15 children have blonde hair.

There are 28 PE kits in the cloakroom.

50% of the PE kits include red shorts.

0.25 of the PE kits include blue shorts.

The rest of the PE kits include green shorts.

How many PE kits include green shorts?

14 red shorts.

7 blue shorts.

$$14 + 7 = 21$$

$$28 - 21 = 7$$

7 PE kits include green shorts.





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There are 35 pairs of scissors.

$\frac{3}{5}$ of them are right-handed scissors.

20% are left-handed scissors.

The remaining scissors are for cutting wavy lines.

How many pairs of scissors are for cutting wavy lines?

0.13 of the books in the library are dictionaries.

47% of the books in the library are fiction.

The rest of the books are non-fiction.

What fraction of the books are non-fiction?



In KS2, there are 250 children.

0.4 of them have brown hair.

16% have ginger hair.

$\frac{11}{50}$ of them have black hair.

The rest have blonde hair.

How many children in KS2 have blonde hair?

There are 30 PE kits in the cloakroom.

$\frac{2}{3}$ of the PE kits include a jumper.

75% of the jumpers are blue.

How many jumpers aren't blue?



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There are 35 pairs of scissors.

$\frac{3}{5}$ of them are right-handed scissors.

20% are left-handed scissors.

The remaining scissors are for cutting wavy lines.

How many pairs of scissors are for cutting wavy lines?

21 right-handed scissors.

7 left-handed scissors.

$$21 + 7 = 28$$

$$35 - 28 = 7$$

7 pairs of scissors are for cutting wavy lines.

0.13 of the books in the library are dictionaries.

47% of the books in the library are fiction.

The rest of the books are non-fiction.

What fraction of the books are non-fiction?

$$13\% + 47\% = 60\%$$

$$100\% - 60\% = 40\%$$

$$40\% = \frac{40}{100} \text{ or } \frac{4}{10} \text{ or } \frac{2}{5}$$

$\frac{2}{5}$ of the books are non-fiction.

In KS2, there are 250 children.

0.4 of them have brown hair.

16% have ginger hair.

$\frac{11}{50}$ of them have black hair.

The rest have blonde hair.

How many children in KS2 have blonde hair?

100 children have brown hair.

40 children have ginger hair.

55 children have black hair.

$$100 + 40 + 55 = 195$$

$$250 - 195 = 55$$

55 children have blonde hair.

There are 30 PE kits in the cloakroom.

$\frac{2}{3}$ of the PE kits include a jumper.

75% of the jumpers are blue.

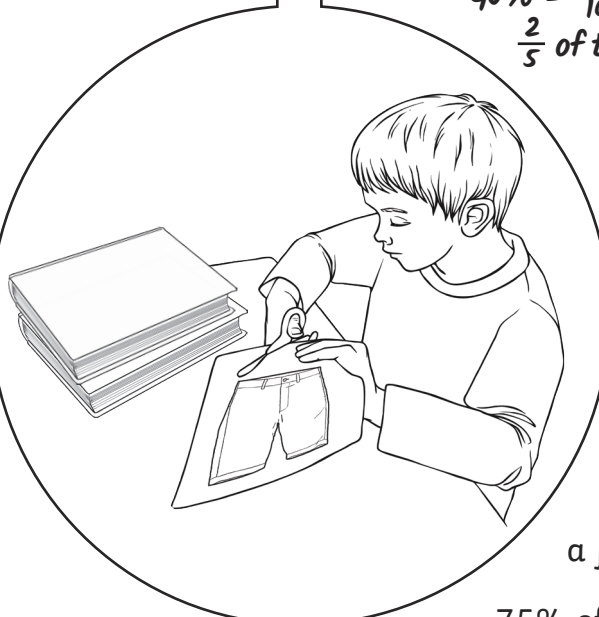
How many jumpers aren't blue?

20 PE kits have a jumper.

15 jumpers are blue.

$$20 - 15 = 5$$

5 jumpers aren't blue.





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There are 36 pairs of scissors.

75% of them are right-handed scissors.

$\frac{2}{3}$ of the remaining scissors are left-handed scissors.

The remaining scissors are for cutting wavy lines.

How many pairs of scissors are for cutting wavy lines?

56% of the books in the library are fiction.

The rest of the books are non-fiction.

Of these non-fiction books, 0.5 of them are information books and $\frac{1}{4}$ of them are biographies.

The rest are cookbooks.

What fraction of the books are cookbooks?



There are 400 children in a school.

55% of them are in KS2.

0.2 of the children in KS2 have brown hair.

$\frac{1}{10}$ of the children in KS2 have ginger hair.

15% of the children in KS2 have black hair.

The rest of the children in KS2 have blonde hair.

How many children in KS2 have blonde hair?

In a class of children, there are 15 girls and 10 boys.

0.8 of the boys have black trainers in their PE kit.

The rest of the class have white trainers in their PE kits.

How many children have white trainers?



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75% of them are right-handed scissors.

$\frac{2}{3}$ of the remaining scissors are left-handed scissors.

The remaining scissors are for cutting wavy lines.

How many pairs of scissors are for cutting wavy lines?

27 right-handed scissors.

6 left-handed scissors.

$$27 + 6 = 33$$

$$36 - 33 = 3$$

3 pairs of scissors are for cutting wavy lines.

56% of the books in the library are fiction.

The rest of the books are non-fiction.

Of these non-fiction books, 0.5 of them are information books and $\frac{1}{4}$ of them are biographies.

The rest are cookbooks.

What fraction of the books are cookbooks?

44% of the books are non-fiction.

22% are information books.

11% are biographies.

$$22\% + 11\% = 33\%$$

$$44\% - 33\% = 11\%$$

$\frac{11}{100}$ of the books are cookbooks.

There are 400 children in a school.

55% of them are in KS2.

0.2 of the children in KS2 have brown hair.

$\frac{1}{10}$ of the children in KS2 have ginger hair.

15% of the children in KS2 have black hair.

The rest of the children in KS2 have blonde hair.

How many children in KS2 have blonde hair?

220 children in KS2.

44 children in KS2 have brown hair.

22 children in KS2 have ginger hair.

33 children have black hair.

$$44 + 22 + 33 = 99$$

$$220 - 99 = 121$$

121 children have blonde hair.



In a class of children, there are 15 girls and 10 boys.

0.8 of the boys have black trainers in their PE kit.

The rest of the class have white trainers in their PE kits.

How many children have white trainers?

8 boys have black trainers.

$$25 - 8 = 17$$

17 children have white trainers.