

LEARN DECIMALS | QUICK REVISION

Understand place value, compare and round decimals

1. Place Value and Decimal Notation

Digits after the decimal point represent tenths, hundredths and thousandths. Example: 4.375 has 3 tenths, 7 hundredths and 5 thousandths.

Ones

6

Tenths

2

Hundredths

0

Thousandths

4

$$6.204 = 6 + 0.2 + 0.004$$

REMEMBER

A zero is a place holder: 6.204 has 0 hundredths, not 2 hundredths.

2. Comparing and Ordering Decimals

Align the decimal points and add trailing zeros if needed. Compare digits from left to right.

$$0.68 = 0.680 \quad < \quad 0.700 = 0.7$$



REMEMBER

Adding zeros to the end of a decimal does not change its value: $0.7 = 0.70$.

3. Rounding Decimals

Check the next digit to the right. If it is 5 or more, round up; otherwise keep the digit.

$$8.476 \text{ rounded to 2 decimal places} = 8.48$$

$$8.476 \text{ rounded to 1 decimal place} = 8.5$$

REMEMBER

Underline the place you are rounding to, then look at the digit immediately after it.

LEARN DECIMALS | QUICK REVISION

Calculate accurately with decimal numbers

4. Adding and Subtracting Decimals

Line up the decimal points. Fill empty places with zeros when helpful, then work column by column.

12.50

- 3.78

8.72

12.5 - 3.78

= 12.50 - 3.78

= 8.72

REMEMBER

The decimal points must be in the same column when adding or subtracting.

5. Multiplying Decimals

Multiply as whole numbers first. Then count the decimal places in both factors and put the decimal point in the answer.

2.4 x 0.3



24 x 3 = 72

1 decimal place

2 places in total

Answer: 0.72

REMEMBER

Estimate first: 2.4×0.3 is less than 2.4, so 0.72 is reasonable.

CHECK YOUR WORK

For addition, subtraction and multiplication, estimate your answer to check the decimal point is sensible.

LEARN DECIMALS | QUICK REVISION

Divide decimals and understand powers of ten

6. Dividing Decimals

When dividing by a whole number, keep the decimal point aligned. If the divisor is a decimal, multiply both numbers by the same power of ten.

$$6.48 / 4 = 1.62$$

$$4.5 / 0.5 \quad \longrightarrow \quad 45 / 5 = 9$$

REMEMBER

Multiplying both the dividend and divisor by 10 keeps the quotient unchanged.

7. Multiplying and Dividing by 10, 100 and 1000

Digits move between place-value columns. Multiply by 10: digits move one column left. Divide by 100: digits move two columns right.

Tens

Ones

Tenths

Hundredths

Thousandths

$$0.037 \times 100 = 3.7$$

$$45.6 / 1000 = 0.0456$$

REMEMBER

Think about place value rather than just moving the decimal point. Use zeros as placeholders.

QUICK CHECK

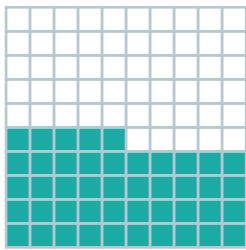
$$0.52 \times 10 = 5.2 \quad | \quad 7.4 / 100 = 0.074$$

LEARN DECIMALS | QUICK REVISION

Connect decimals to fractions, percentages and real-life problems

8. Fractions, Decimals and Percentages

Divide the numerator by the denominator to make a decimal. Multiply a decimal by 100 to convert it to a percentage.



45 shaded squares out of 100

$$45/100 = 0.45 = 45\%$$

Also: $3/8 = 0.375 = 37.5\%$

REMEMBER

Percent means out of 100. Example: $0.45 \times 100 = 45\%$.

9. Money, Measures and Word Problems

Read the question carefully, keep the units consistent and decide which operations to use.

A ribbon is 3.5 m long.

You cut off 0.85 m and 1.2 m.

$$3.50 - 0.85 - 1.20 = 1.45 \text{ m}$$

Remaining ribbon: 1.45 m

REMEMBER

For money, write answers to 2 decimal places. Remember: 1 m = 100 cm and 1 km = 1000 m.

REVISION CHECKLIST

I can read, compare and round decimals; calculate with decimals; multiply and divide by powers of ten; convert between fractions, decimals and percentages; and solve decimal word problems.