



KING EDWARD VI
HANDSWORTH GRAMMAR
SCHOOL FOR BOYS



KING EDWARD VI
ACADEMY TRUST
BIRMINGHAM

2025 **Year 7** **2026**
Mathematics
Calculator

Name: _____

Class: _____

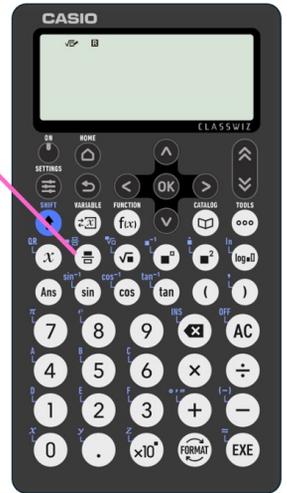
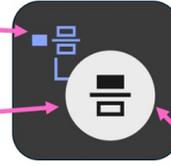
Fractions

In Unit 3, we learnt about fractions.

There are two things you need to know to enter fractions on the calculator.

mixed numbers

proper/improper
fractions



Let's enter these calculations.

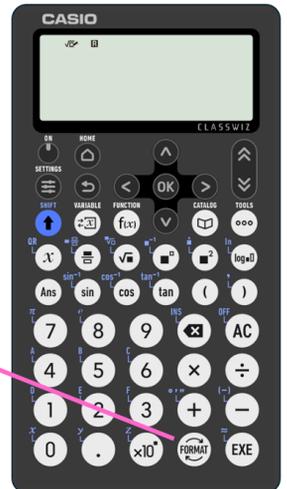
1. $\frac{5}{6} + \frac{2}{3}$

2. $\frac{5+2}{6+3}$

3. $2\frac{2}{5} \times \frac{11}{8}$

If an answer is not an integer, your calculator will always show it as a fraction. If this answer is greater than one whole, it will show it as an improper fraction.

You can convert the answer to a decimal or a mixed number with the format button.



Choose the correct format from the menu.

Format Button

Format Button

Changes the format of the answer



When an answer is not an integer value the calculator will display the answer in its standard setting.



To change this, press the format button.

The next menu shows the format options.

Standard
Decimal
Improper Fraction
Mixed Fraction

Use the arrow keys followed by ok to choose the format you want.



Standard

Decimal

**Improper
Fraction**

**Mixed
Fraction**

$$\frac{19}{4}$$

4.75

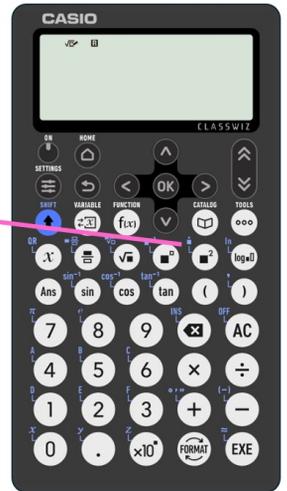
$$\frac{19}{4}$$

$$4\frac{3}{4}$$

Recurring Decimals

We can also enter recurring decimals into the calculator.

recurring decimals



Recurring Decimals

Using the recurring decimal button



Convert a recurring decimal to a fraction

Type 0 . then press  

This brings up the recurring decimal box



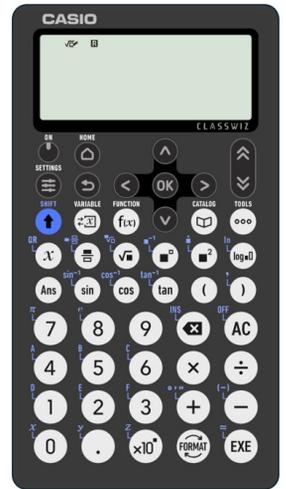
Now type the recurring decimals in the box and press execute.



Fractions

Let's use the calculator to make these conversions.

1. Write $2\frac{2}{7}$ as an improper fraction.
2. Write $\frac{100}{37}$ as a mixed number.
3. Write $\frac{5}{8}$ as a decimal.
4. Write **0.456** as a fraction in its simplest form.
5. Write **4.2** as an improper fraction and a mixed number.
6. Write **0.1̇** as a fraction.
7. Write **0.12̇** as a fraction.
8. Write **0.12̇** as a fraction.



Decimals, Powers and Roots

In Unit 2, we learnt about powers and roots with positive integers.
We can use decimals too.

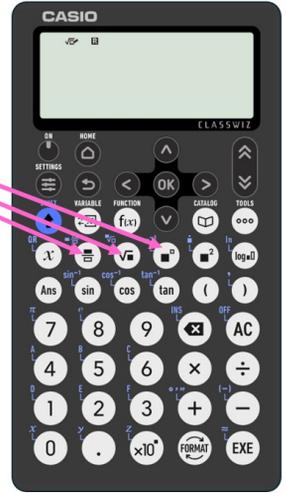
On the calculator, let's find

$$1.5^3$$

$$4.89^6$$

$$\sqrt{0.00036}$$

$$\sqrt[4]{1.04060401}$$



Brackets

In Unit 2 we learnt about using brackets to break the order of operations. On the calculator, brackets are here.

Find the answers to these using your calculator.

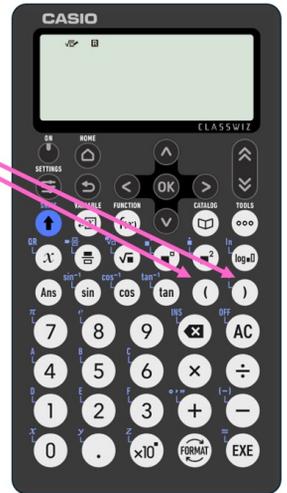
$$2 \times (3 + 5)$$

$$2(3 + 5)$$

$$(3 + 5)^2$$

$$\sqrt{3 + 5}$$

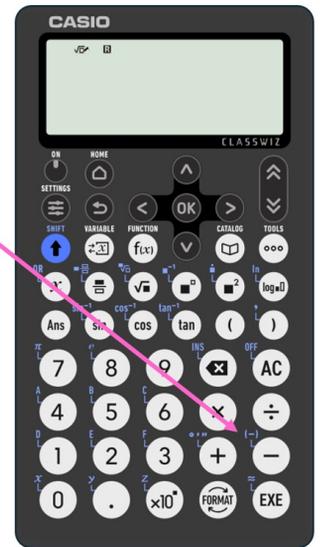
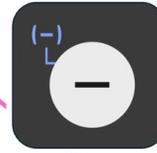
$$\sqrt{3} + 5$$



Negative Numbers

In Unit 1, we learnt about negative numbers and calculated with them.

On the calculator, the negative sign is here



Find the answers to these using your calculator.

1. $-4 + 6$

2. $-7 \cdot -5 \cdot 3 \cdot -2$

3. $-2 + \frac{7}{8}$

4. $\frac{-2+7}{8}$

5. $(-10) \div (-2)$ and $-10 \div -2$

Fluency Practice

1. Work these out using your calculator. Make sure the display looks *exactly* like each question. Write each answer as an integer or a decimal.

a. $\frac{2}{5} + 0.5$

b. $\frac{2+0.5}{5}$

c. $2 + \frac{0.5}{5}$

d. 1.4^2

e. 15^5

f. $\sqrt{6561}$

g. $\sqrt[3]{6.2748517}$

h. $(13 - 3^2)^3$

i. $\frac{-2 \times 6}{-5 + -3}$

j. $(0.\dot{7}) \cdot (9) \cdot (-2)$

k. $\sqrt{15^3 - 2799}$

l. $\sqrt{15^3} - 2799$

Negative Numbers

Notice how this button has brackets around the negative sign.
This is to help you remember something important.

Notice how this button has brackets around the negative sign.
This is to help you remember something important.
Error: -4^2 into the calculator.
Error: (-4)^2 into the calculator.
Which of these answers is the correct square of -4?
The calculator will work out powers of negative numbers correctly if you enter the negative number in brackets.
Find these powers: (-9)^4, (-7)^3, (-11)^2, (-2.5)^0

Enter -6^2 into the calculator.

Enter $(-6)^2$ into the calculator.

Which of these answers is the correct square of -6 ?

The calculator will work out powers of negative numbers correctly if you enter the negative number in brackets.

Find these powers: $(-5)^4$, $(-7)^3$, $(-11)^2$, $(-2.5)^0$

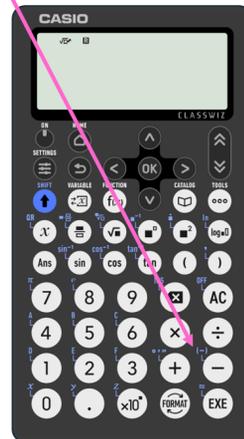
Let's find some roots with negative numbers.

1. $\sqrt[3]{-125}$

2. $\sqrt[5]{-32}$

3. $\sqrt{-9}$

4. $\sqrt[3]{-\frac{8}{27}}$



Let's look at squaring and square rooting in a little more detail.

Find these powers on your calculator.

$$11^2 \quad \text{and} \quad (-11)^2$$

If you type $\sqrt{121}$ into your calculator, it will give you the principal square root of 11.

The principal square root is always positive. You need to remember that there is also a negative square root, $-\sqrt{121} = -11$.



Reciprocals

In Unit 3, we learnt that division is the same as multiplying by the reciprocal.

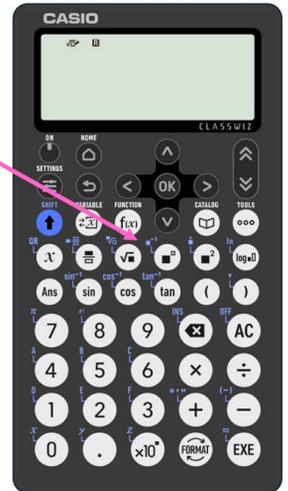
e.g. $\frac{2}{3} \div \frac{4}{5} = \frac{2}{3} \times \frac{5}{4}$



On the calculator, we find a reciprocal with this button.

Let's find the reciprocals of these numbers on our calculator.

5	12	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{2}{7}$
$\frac{2}{8}$	$\frac{4}{5}$	$\frac{9}{2}$	$1\frac{1}{2}$	1.1

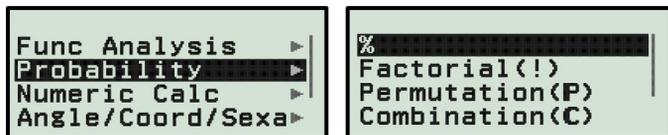


Percentages

In Unit 5 we learnt percentages, fractions and decimals can be equivalent. This means we have three ways of entering percentages in the calculator.

50% can be entered using this button.

Type 50 and press catalog 



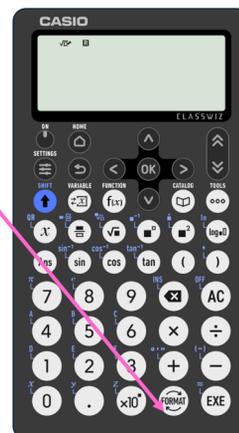
Use the format key to change this to a fraction and a decimal.



Enter these and press 

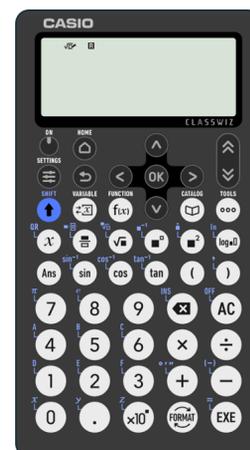
What are their equivalent fractions and decimals?

- 60%
- 0.5%
- 138%



In Unit 5 we learnt that to find a percentage of an amount, we multiply.

e.g. Find 36% of 520.

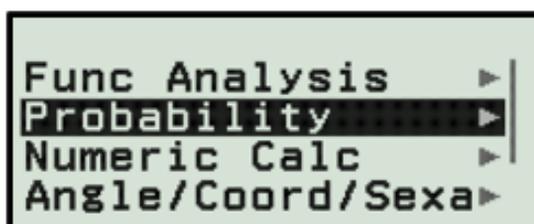


Percentages

The percentage button

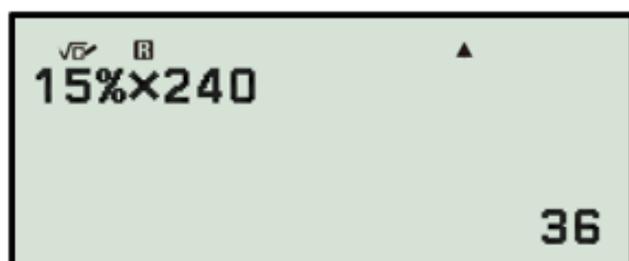
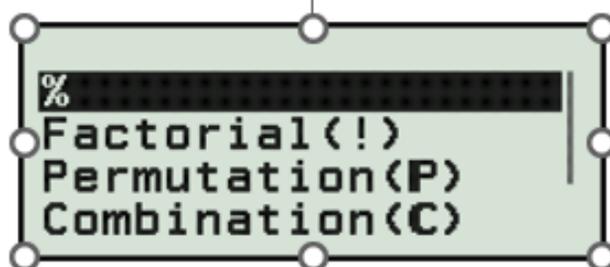
To calculate 15% of 240

Type 15. Press  catalog button



Move down to probability and use the right arrow key to access next menu.

Click ok and this will put the % into your calculation.



You can now complete the calculation.



ANS Button

One of the most useful buttons on your calculator is the ANS button.

It remembers the most recent answer and uses it in a new calculation.

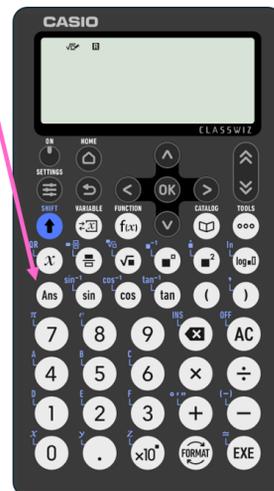
Get the answer to $5 + 3$ on your calculator.

Now press ANS $\times 10$. What happens?

Now press =. What happens?

Now press =. What happens?

Now press =. What happens?



Fluency Practice

2. Work these out using your calculator.

a. $(-17)^2$

b. $(-17)^3$

c. -17^2

d. $(-27)^{\frac{1}{3}}$

e. $\sqrt[5]{-32}$

f. $\sqrt{-121}$

g. the reciprocal of 8

h. the reciprocal of 0.8

i. 12% of 98

j. 150% of 4000

k. $3\frac{1}{2}\%$ of 18

Worked Example

Here is a calculation

$$\begin{array}{r} 5.26 + 3.48 \\ \hline \sqrt{100 - 7.2} \end{array}$$

- a) Work it out and write down all the digits on your calculator display.
- b) Round your answer to 2 significant figures.

Your Turn

Here is a calculation

$$\begin{array}{r} \sqrt{790 - 16.23} \\ \hline 12 + 0.1 \end{array}$$

- a) Work it out and write down all the digits on your calculator display.
- b) Round your answer to 3 significant figures.

Fluency Practice

3. Complete the table by working out the answers on your calculator. The first one is done for you.

	Calculation	Full display answer (stop at 10 digits where necessary)	Rounded to 3 significant figures
e.g.	$\frac{143 \times 98}{12 - 0.6}$	1229.298246	1230
a	$\frac{14 + 72}{90 - 81}$		
b	$\frac{0.8 - 0.04}{1.1 \times 4.5}$		
c	$19 - \sqrt{\frac{36.7}{2}} + \frac{2}{3}$		
d	$-13(98^2 - 10^4)$		
e	$\sqrt{9^2 + 17^2}$		
f	$\frac{-12 + \sqrt{6^2 - 4 \times 2 \times 3}}{4}$		
g	$\frac{-12 - \sqrt{6^2 - 4 \times 2 \times 3}}{4}$		

4.

David is studying blood cells through a microscope.

The diameter of a red cell is 0.000714 cm and the diameter of a white cell is 0.001243 cm.

- (a) Use a calculator to work out the difference between the diameter of a red cell and the diameter of a white cell.

Give your answer in *millimetres*.

David wants to explain how small the cells are.

He calculates how many white cells would fit across a full stop which has a diameter of 0.65 mm.

- (b) How many whole white cells would fit across the full stop?

Fluency Practice

Equivalent Representations Table



All the numbers in each row are different representations of the same value.

Can you use your calculator to complete the table?

- Use the following buttons to help you out. [$\frac{\square}{\square}$] ($a\frac{b}{c}$) [$\frac{\square}{\square}$] ($\frac{\square}{\square}$) (\blacksquare) (%)
- Use your rounding skills, especially for the percentage column, as this must be given to three significant figures.
- Shade any area where that representation is not available.

Fraction	Mixed Number	Decimal (Full calculator display of up to 10 significant figures)	Recurring decimal	Percentage (Give to 3 significant figures)
$\frac{16}{9}$				
				210% (Not rounded)
		0.875		
	$5\frac{2}{3}$			
			$0.\dot{2}$	
$\frac{1}{33}$				
				3% (Not rounded)
			$9.\dot{8}$	
	$50\frac{1}{6}$		Be careful with the recurrence here	Be careful here with rounding to 3 s.f.
$\frac{1}{12}$		1.416666667		
			$1.\dot{6}\dot{7}$ Be careful here	
				300.1% (Not rounded)
$\frac{2}{123}$				
			$5.4\dot{5}$	
	$2\frac{\quad}{4500}$	2.000222222		

Using a calculator: ODD one out

In each row, two of the cells have the same value and the third one is different. Decide which is the odd one out.

$\frac{\sqrt{11.56}}{4}$	$\sqrt{\frac{11.56}{4}}$	1.7
-3.6^2	$(-3.6)^2$	12.96
$\sqrt{6.76} + 5.49$	8.09	3.5
$\sqrt[3]{15625}$	25	125
$\frac{15.8 + 3.5^2}{7.5 - 3.76}$	-0.02	7.5
$6.2 + 4.9^2$	$(6.2 + 4.9)^2$	30.21

**N.B. In one of these rows, all three cells are equal - there isn't an odd one out! Which row is it?

-4.1^2	16.81	-16.81
$\frac{26.25}{3.5^2}$	$\left(\frac{26.25}{3.5}\right)^2$	56.25
$\sqrt[3]{91.125 - 3.7}$	$\sqrt[3]{91.125} - 3.7$	0.8
$7.5 \times 2.3 + 3.1$	$7.5(2.3 + 3.1)$	40.5
$\frac{3}{1.6} \times \frac{2.2}{0.8}$	$\frac{3 \times 2.2}{1.6 \times 0.8}$	5.15625
$\frac{626.2 - 6}{5 \times 0.8}$	$\frac{626.2 - 6}{5} \times 0.8$	155.05
$\frac{26.5 - 12}{27.6 - 21.8}$	4.265217391	2.5

Fluency Practice

Fluency Practice

(a)	Calculate $\frac{\sqrt{2.6244}}{5}$		
(b)	Calculate $6.3^2 - 0.2^3$	(c)	Calculate $\frac{7}{12} + \frac{2}{15}$
(d)	Calculate $2 \times \pi^4$, giving your answer to 3 significant figures.		
(e)	Calculate $\frac{\sqrt{6}}{2.8^3}$, giving your answer to 3 decimal places.	(f)	Convert 0.57 to a fraction.
(g)	Calculate $4\frac{2}{7} \times 1.82$	(h)	Write 7600 as a product of its prime factors.
(i)	Convert 5.35 hours into hours and minutes.	(j)	Calculate $\sqrt{3.5^2 - 2.2^2}$, giving your answer to 2 decimal places.
(k)	Calculate $2\frac{3}{8} \times 3\frac{1}{4} \times 4.2$, giving your answer as a decimal.	(l)	Convert 7 hours 51 minutes into decimal time.
(m)	(n)		
(i)	Work out the value of $\frac{3\sqrt{2 \times 4.7^2}}{4.52} + \frac{\sqrt[3]{7.2}}{0.6^3}$. Write down all the figures on your calculator display.	(j)	Work out the value of $\pi - \frac{6.1 \times (-2.1)^5}{\sqrt[4]{135}}$. Write down all the figures on your calculator display.
(ii)	Round your answer to 3 significant figures.		

Fluency Practice

<p>A1 Evaluate</p> $\frac{5.2 \times 3.9}{7.3 - 3.6}$ <p>Give your answer correct to 3 significant figures</p>	<p>A2 Evaluate</p> $\frac{9.4 + 8.3^2}{0.7}$ <p>Give your answer correct to 1 decimal place.</p>	<p>A3 Evaluate</p> $\frac{\sqrt{11.7}}{9.5 - 3.8}$ <p>Give your answer correct to 2 significant figures</p>	<p>A4 Evaluate</p> $\frac{31.7 + 9.8}{2.1^2}$ <p>Write down all the figures on your calculator display.</p>
<p>B1 Evaluate</p> $\frac{14.5}{7.2 - 5.9} - 7.3^2$ <p>Give your answer correct to 2 significant figures</p>	<p>B2 Evaluate</p> $21.4^2 + \frac{152}{2.7 + 5.9}$ <p>Write down all the figures on your calculator display.</p>	<p>B3 Evaluate</p> $8.7 + \frac{2.3^2 - 0.3^2}{2 + 4 \times 3}$ <p>Give your answer correct to 1 decimal place.</p>	<p>B4 Evaluate</p> $\sqrt{17.9} + \frac{3.6 \times 13.7}{\sqrt{53.29}}$ <p>Give your answer correct to 3 significant figures</p>
<p>C1 Evaluate</p> $\sqrt{6.3^2 - 2.6^2}$ <p>Give your answer correct to 1 decimal place.</p>	<p>C2 Evaluate</p> $\frac{1.4^3 \times 5.8}{\sqrt{5 - 1.1}} + 2.9$ <p>Give your answer correct to 2 significant figures</p>	<p>C3 Evaluate</p> $\frac{27.2 - 9.7}{5 + \sqrt{3.1}}$ <p>Give your answer correct to 3 significant figures</p>	<p>C4 Evaluate</p> $\frac{17.6 - 3.05}{(4.6 + 6.8)^2}$ <p>Write down all the figures on your calculator display.</p>
<p>D1 Evaluate</p> $\sqrt{4.5^2 + (-7.1)^2}$ <p>Write down all the figures on your calculator display.</p>	<p>D2 Evaluate</p> $1.2^6 + \frac{2.4^2 \times 5.3}{28 - 3.2^3}$ <p>Give your answer correct to 3 significant figures</p>	<p>D3 Evaluate</p> $\frac{4 \times (12.3 - 4.8)^2}{5\sqrt{12}}$ <p>Give your answer correct to 2 significant figures</p>	<p>D4 Evaluate</p> $\frac{4 + \sqrt{(-4)^2 - 4 \times 3 \times (-5)}}{2 \times 3}$ <p>Give your answer correct to 1 decimal place.</p>

Fluency Practice

Question 1: Calculate each of the following

- (a) 28^2 (b) 11^3 (c) 9^4 (d) 3^6 (e) 15^8
(f) 16^0 (g) 2^{13} (h) $(-5)^2$ (i) $(-22)^3$ (j) $(-95)^2$

Question 2: Calculate each of the following

- (a) $\sqrt{576}$ (b) $\sqrt{1089}$ (c) $\sqrt{218089}$ (d) $\sqrt[3]{1000000}$ (e) $\sqrt[3]{9261}$
(f) $\sqrt[4]{81}$ (g) $\sqrt[4]{65536}$ (h) $\sqrt[7]{78125}$ (i) $\sqrt[10]{1024}$

Question 3: Use your calculator to work out the value of each of the following.
Give your answers to 3 decimal places

- (a) $\sqrt{45} + 3.5^3$ (b) $\sqrt[3]{6} + 1.2^2$ (c) $(30.4 - 1.67)^2$
(d) $\sqrt{7.6^2 + 5^2}$ (e) $\sqrt[3]{9^2 - 1.8^3}$ (f) $\sqrt[3]{(25.4 - 5.9)^2}$

Question 4: Use your calculator to work out the value of each of the following.
Give your answers to 5 decimal places

- (a) $\frac{3.5}{1.4 + 3.8}$ (b) $\frac{7.8 \times 5.3}{11.7}$ (c) $\frac{29.82 - 4.099}{50.3 + 6.11}$
(d) $\frac{0.18 + 0.175}{2.4 \times 1.9}$ (e) $\frac{0.495}{0.091} \times 604.6$ (f) $15 - \frac{3.7 \times 2}{4.8}$
(g) $\frac{5.92}{9.11} + \frac{7.34}{2.89}$ (h) $3\frac{1}{7} \times 2\frac{9}{10}$ (i) $5.23 \times \left(\frac{1.23}{0.07} + \frac{3}{4}\right)$

Fluency Practice

Question 5: Use a calculator to work out each of the following
Write down all the figures on your calculator display

(a) $\frac{2240}{5.3^2 - 9.4}$

(b) $\sqrt{\frac{14.67}{0.113}}$

(c) $\sqrt[3]{\frac{81.81 + 29.9}{3.08 - 0.775}}$

(d) $\frac{18.2 + 7.4}{\sqrt{9.22}}$

(e) $\frac{\sqrt{17.8 - 9.93}}{1.25 - 5.9}$

(f) $\frac{\sqrt{39.75 + 24.44}}{0.55 \times \sqrt[3]{1.2 \times 1.9}}$

Question 6: Round the answers to question 5 to one significant figure

Apply

Question 1: Jamie is trying to use his calculator to work out $(-29)^2$
His answer is -841
Explain his mistake.

Question 2: Hannah thinks the answer to $3.25 - 1.25^2$ should be 4 because
 $3.25 - 1.25 = 2$ and then $2^2 = 4$
Explain why the answer on her calculator is 1.6875

Question 3: Simon has calculated the answer to $\frac{7.68 - 6.2}{4.51 + 1.33}$ is $\frac{21}{73}$

Explain how Simon can change this answer to a decimal

Fluency Practice

calculator word answers (when the calculator is turned upside-down it should spell out a word)

$3^5 \times 5^2$ work dead hard

$23 \times 10(8 + 9) - 3$ don't find

$(10 - 7)(10 + 7)$ in the middle of the mist

$11^2(2^5 - 1)$ we live on one

$2(14^4) + 3(9(9 + 10))$ sometimes it's nice to have a sunny one
(or snail house on some calculators)

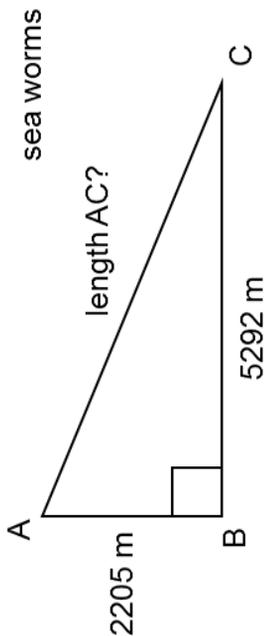
$\frac{2^3(10^3 + 1) - 1}{1\frac{1}{2}}$ to be or not to be?

$14^2(2^5 \times 3^2 - 7)$ on doors and lips

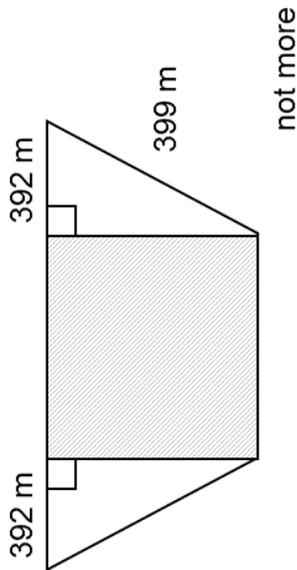
$\frac{10^2(13^2 - 11) - 324}{2}$ chimes

$$\sqrt{\left(\frac{9 \times 13^3 + 3 \times 6^2}{4 \times 10^4}\right)}$$

go it alone



area of the square inside the isosceles trapezium?



Days, Weeks and Months

Let's make sure we remember some important units of time.

1 minute	=	seconds
1 hour	=	minutes
1 day	=	hours
1 week	=	days
1 year	=	weeks
1 year	=	days
1 leap year	=	days

January has	days
February has	days
March has	days
April has	days
May has	days
June has	days
July has	days
August has	days
September has	days
October has	days
November has	days
December has	days

Worked Example

- a) Work out how many hours there are in May.
- b) 25th May is a Friday. What will be the date of the next Friday?

Your Turn

- a) Work out how many hours there are in February.
- b) 28th June is a Wednesday. What will be the date of the next Thursday?

Fluency Practice

1. If 25 March is a Friday, what will be the date on the following Friday?
2. Sasha goes on holiday on Monday 20 June. She returns 14 days later. On what date does she return from her holiday?
3. If 3 October is a Monday:
 - a. what day of the week will 1 November be?
 - b. what will be the date of the first Monday in November?
4. Hannah goes to the bank every Tuesday. The last time she went was on Tuesday 20 October.
 - a. What will be the dates of her next 2 visits to the bank?
 - b. On the second Tuesday in November she is ill and goes to the bank on Wednesday instead. What is the date of that Wednesday?
5. This year Mike's birthday is on a Saturday in June. What day will his birthday be on next year if:
 - a. next year is a leap year?
 - b. next year is *not* a leap year?
6. In 1998, Christmas Day was on a Friday. Name the day of the week for Christmas Day in:
 - a. 1997
 - b. 2000.
7. How many hours are there in each of these time frames?
 - a. September
 - b. February (two answers needed)
 - c. one year (two answers needed)

Time

We can work with time on our calculator using this button.
We enter time in the form HOURS° MINUTES° SECONDS°



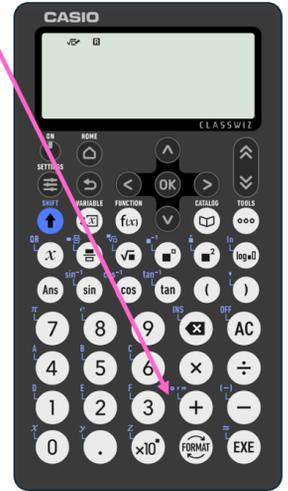
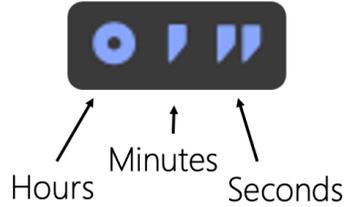
Let's type some times into the calculator.

2 hours, 5 minutes, 30 seconds

10 minutes

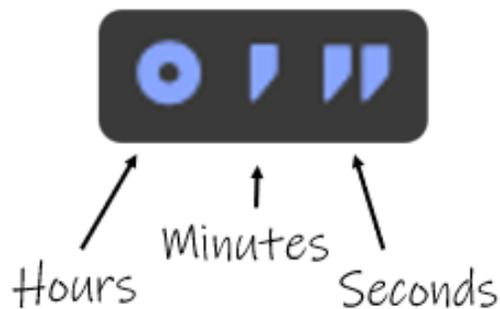
24 hours

45 seconds



Time

Time
Now in blue
on + button



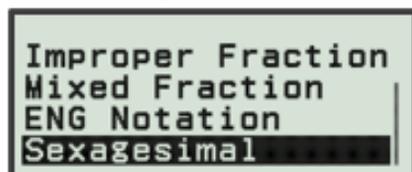
Convert $2\frac{1}{4}$ hours to hours and minutes

Type in mixed number and press **EXE**



Method 1

Press **FORMAT** and chose sexagesimal.



Method 2

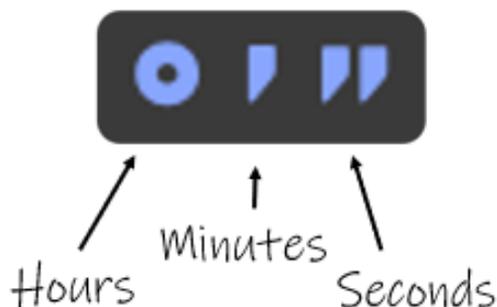
Press **↑** **+**



Both answers read 2 hours, 15 minutes, 0 seconds

Time

Time
Now in blue
on + button



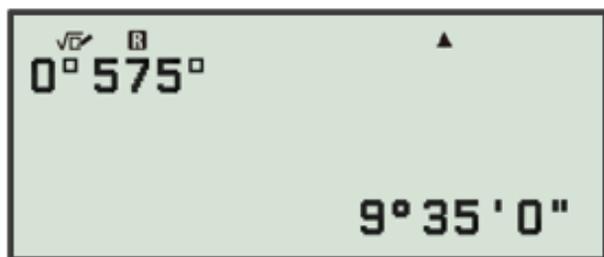
Convert 575 minutes to hours and minutes

Type $0 \uparrow +$ This represents 0 hours

Type $5 \ 7 \ 5 \uparrow +$ This represents 575 minutes

If there are 0 seconds you do not need to put these in.

Press EXE

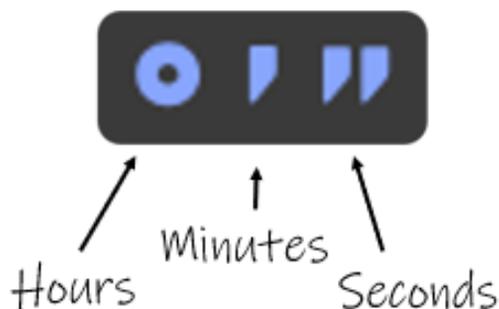


This automatically changes the value to hours and minutes

The answer reads 9 hours, 35 minutes, 0 seconds

Time

Time
Now in blue
on + button



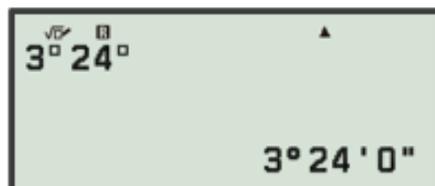
Convert 3 hours 24 minutes to hours

Type $3 \uparrow +$ This represents 3 hours

Type $24 \uparrow +$ This represents 24 minutes

If there are 0 seconds you do not need to put these in.

Press EXE



Press FORMAT and chose the format you want



Decimal



Improper fraction

Mixed number

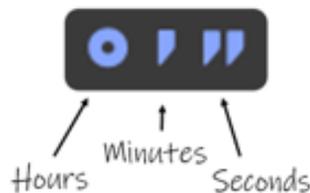


Time

Time calculations

Here is the bus timetable.

Newcastle	0915	0945	1015
Killingworth	0944	1014	1044
Water park	1018	1048	1118



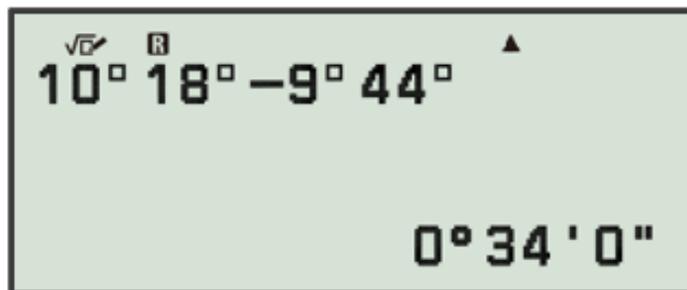
How long does their bus take from Killingworth to the water park?

For 1018 type

10 18 This represents 10 hours and 18 minutes

And you want to subtract the starting time of 0944

9 44



The calculator shows 0 hours, 34 minutes and 0 seconds

Worked Example

A tennis match lasts for 2 hours 26 minutes.

The following match lasts for 1 hour 15 minutes.

What is the total time of the two matches?

Your Turn

There are two songs in a performance.

The first is 3 minutes 12 seconds long and the second is 4 minutes 50 seconds long.

How long does the performance last for?

Worked Example

Convert 4.62 hours into hours, minutes and seconds.

Your Turn

Convert 15.3 hours into hours, minutes and seconds.

Fluency Practice

8. Using your calculator, convert these times into hours, minutes and seconds.
- | | |
|-----------------|---|
| a. 0.5 hours | f. 138 seconds |
| b. 0.5 minutes | g. 13.8 seconds |
| c. 1.2 hours | h. 7 days |
| d. 13.6 minutes | i. 1 week, 3½ hours |
| e. 138 minutes | j. 3 weeks, 4 days, 10 hours and 25 minutes |
- 9.
- For how many days have you been alive?
 - How many *hours* is this?
 - How many *minutes* is this?
 - How many *seconds* is this?
 - David has been alive for approximately 1 892 160 000 seconds. In which year do you think he was born?
10. Some pupils are rehearsing pieces of music for a performance. Here are the lengths of their pieces.
- Pupil A: 1 minute 15 seconds
Pupil B: 3 minutes 4 seconds
Pupil C: 2 minutes 48 seconds
Pupil D: 9 minutes 30 seconds
- Work out the total length of time of the four pieces.
 - If the teacher adds on 5 minutes to allow for introductions, goodbyes and the gaps between pieces, how long should the performance be?
 - Pupil D decides to cut out the middle section of their piece, reducing it by 4 minutes 29 seconds. How long is the total performance now?
 - If the performance starts at 15:30, what time should it finish?