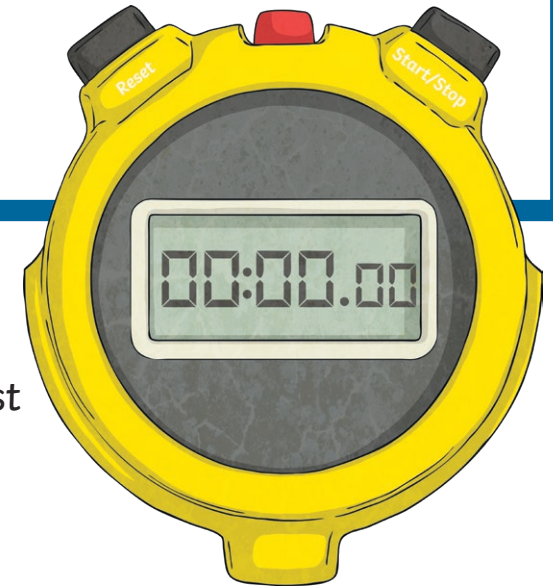


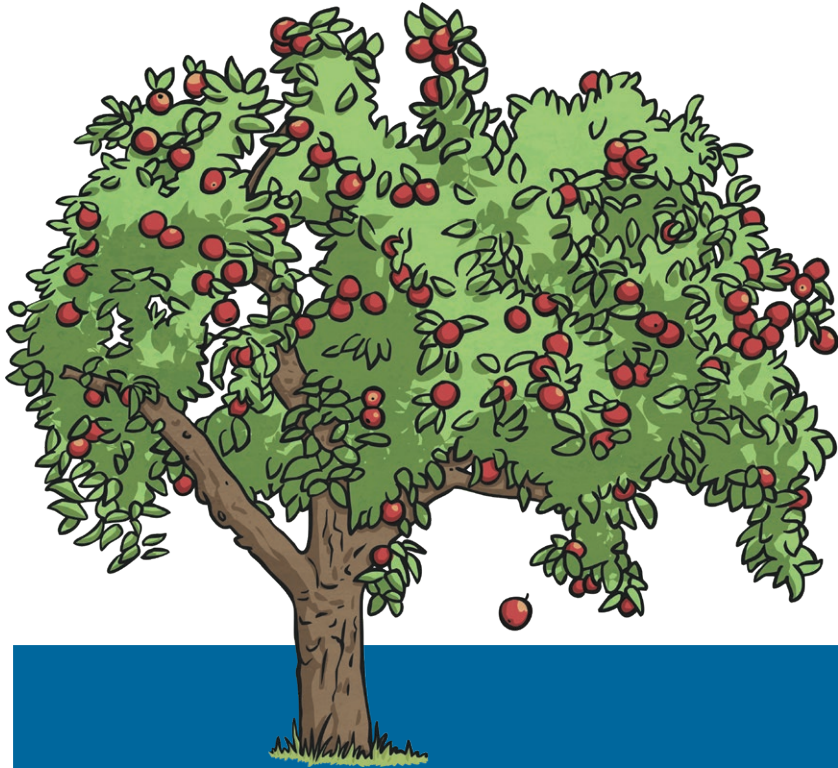
## Clue for Digit 1

Class 5 did an experiment to test if objects with different masses fall at different speeds. They dropped objects of different masses from a height. They used a stopwatch to record how quickly each object fell to the ground.



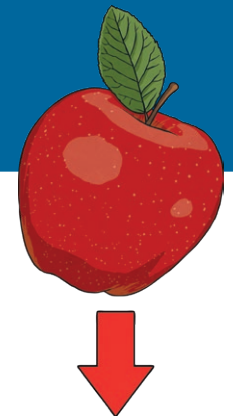
How many variables did Class 5 change in their experiment? This is the first digit on the keypad.

## Clue for Digit 2



The number of letters in the missing word is the second digit on the keypad.

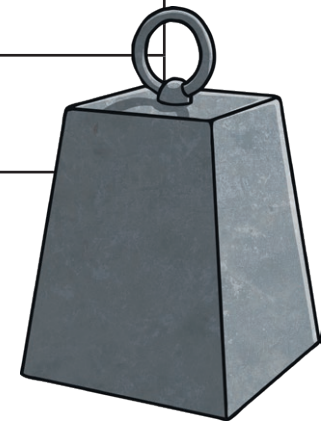
Gravity is an invisible force that pulls objects \_\_\_\_\_ each other.



## Clue for Digit 3

Read these statements.

	True	False
Mass is a force.		
Force is measured in Newtons.		
Weight is a force.		
Length is a force.		
A force is a push or a pull.		
Friction is a force which makes moving things go faster.		
Upthrust is a type of friction.		



The number of true statements is the third digit on the keypad.

## Clue for Digit 4

Look at these forces.



Someone skydiving



Someone sitting on a chair



A car accelerating



A bike resting next to its rider

Which are balanced forces and which are unbalanced forces? The number of balanced forces is the fourth digit on the keypad.

## Clue for Digit 5

Read the clues about forces and write the answer with one letter in each box.

The force when a magnet pulls towards a metal or another magnet.

--	--	--	--	--	--	--	--	--	--

The force that slows a moving object down.

--	--	--	--	--	--	--	--

The force that pulls Earth and other planets towards the Sun.

--	--	--	--	--	--	--	--

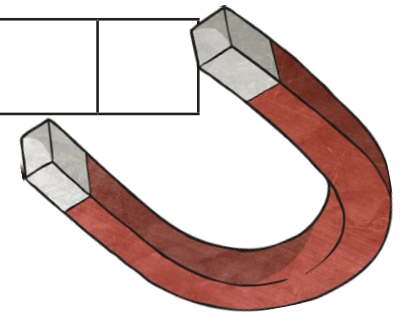
The scientist who discovered that gravity existed.

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The force that acts upwards in a fluid.

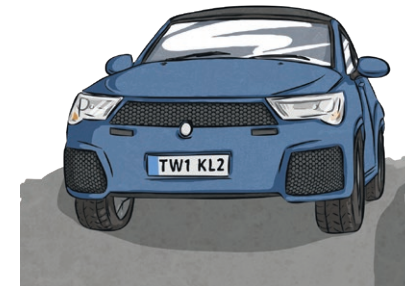
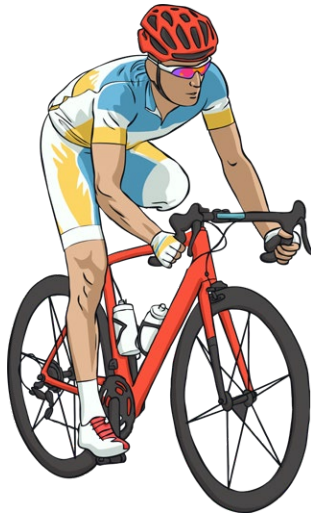
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Rearrange the letters in the orange boxes to spell the next digit on the keypad.



## Clue for Digit 6

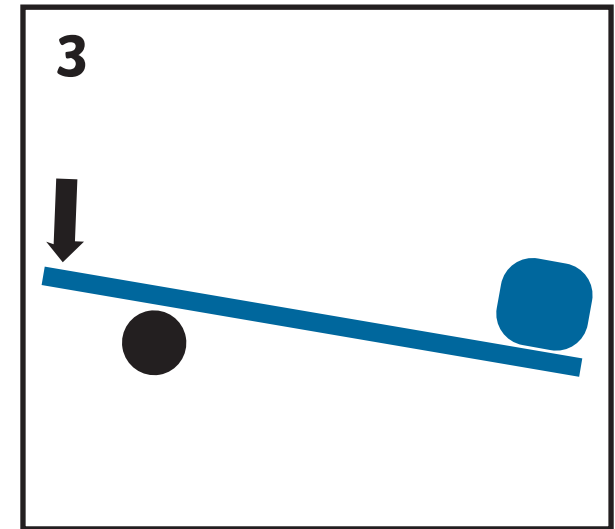
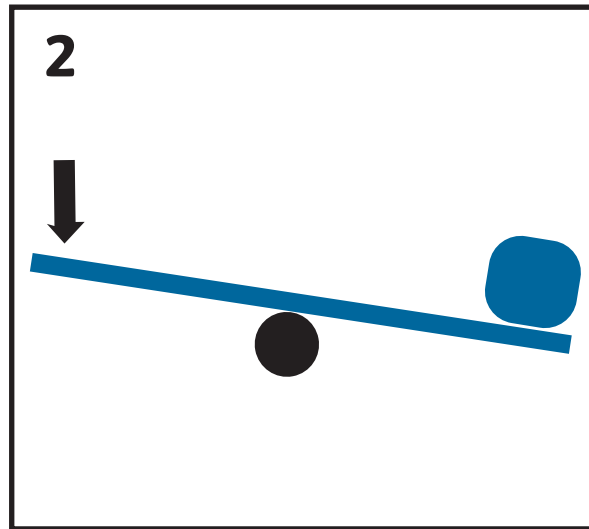
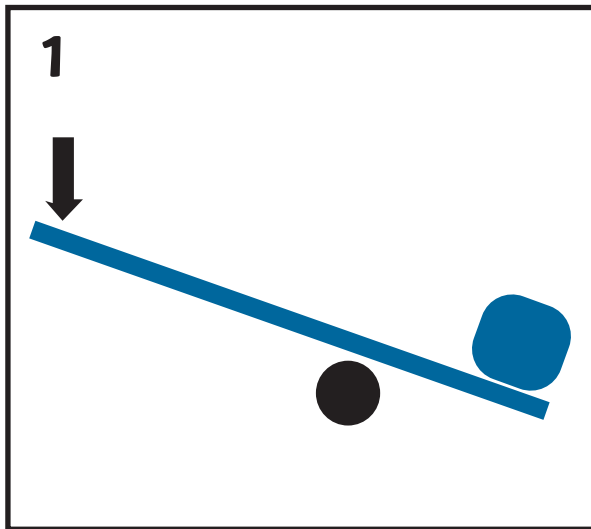
Look at these pictures where friction is occurring.



The number of pictures where friction is useful is the sixth digit on the keypad.

## Clue for Digit 7

Which lever will make lifting the block the easiest?



The number is the seventh digit for the keypad.

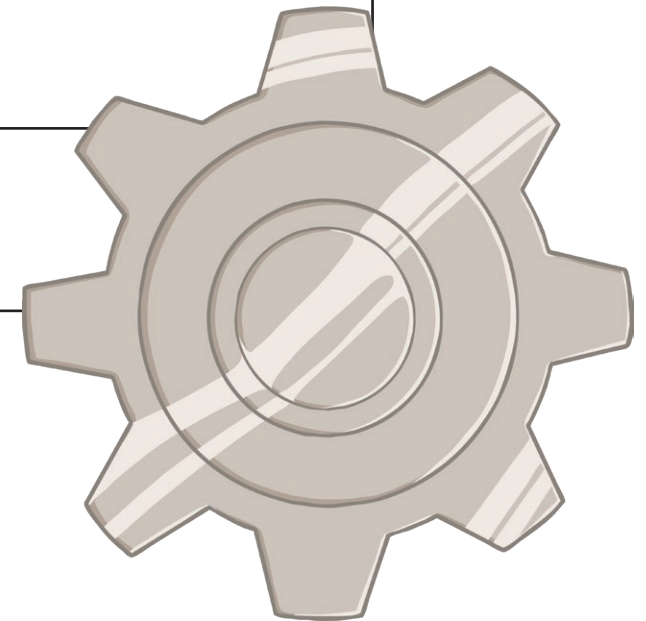
## Clue for Digit 8

Which one of these statements best describes how turning a small gearwheel will affect the speed of a larger gearwheel?

1. The second gearwheel will turn more quickly than the first.

2. Both gearwheels will turn at the same speed.

3. The second gearwheel will turn more slowly than the first.

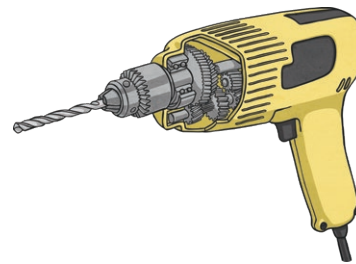
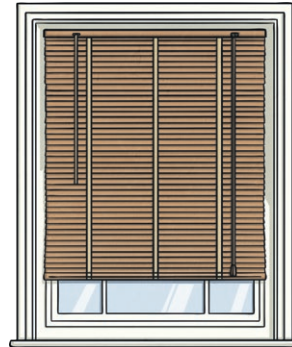
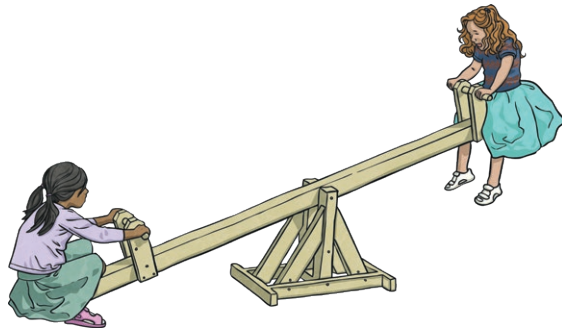


The number of the correct statement is the eight digit on the keypad.



## Clue for Digit 9

All these objects use either levers, pulleys or gears.

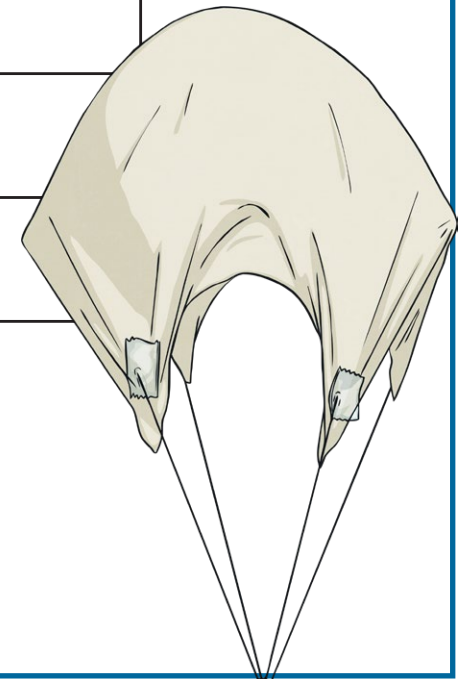


The number of objects that use gears is the ninth digit on the keypad.

## Clue for Digit 10

Class 5 did an experiment to see whether the size of a parachute affects the speed in which it falls. They put their results into a table.

Size of Parachute (cm)	1 <sup>st</sup> Drop (seconds)	2 <sup>nd</sup> Drop (seconds)	3 <sup>rd</sup> Drop (seconds)
4 × 4	8.32	1.25	1.29
8 × 8	2.5	2.66	5.08
16 × 16	3.32	1.56	3.4
32 × 32	4.41	7.43	4.58



How many results appear to be anomalies? This is the tenth digit on the keypad.