

# READ ME

## Decoding from Equations Example

This equation gives the offset number:

$$5x - 2 = 18$$

So, we work out that the offset number is 4.

We can now make a decoding chart.

### Decoding Chart (the code letters are Offset by 4 letters)

Offset Number 4

Message	A	B	C	D	E	F	G	H	I	J	K	L	M
Code	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>	<i>N</i>	<i>O</i>	<i>P</i>	<i>Q</i>

Message	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Code	<i>R</i>	<i>S</i>	<i>T</i>	<i>U</i>	<i>V</i>	<i>W</i>	<i>X</i>	<i>Y</i>	<i>Z</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>

These equations give the coded message:

$$4x = 28$$

$$2x + 1 = 11$$

$$x - 5 = 19$$

So, the solutions in order are 7, 5 and 24.

Convert these to letters (using A=1, B=2, C=3 etc.)

$$7 = G, 5 = E, 24 = X$$

So GEX is the **code**, now **decode** it to find the message.

$$G = C, E = A, X = T$$

The message is CAT