INVERSE OPERATION

$$X - 2 = 8$$
$$X = 8 + 2$$
$$X = 10$$

1, Which part of the expression is already a variable?

2, Which other parts of the expression could be turned into variables?

Algebra Expression Algorithm

Calculate these expressions using the inverse method

X - 4 = 1	X - 3 = 4
X - 5 = 2	X - 8 = 6

Variable: -A symbol that represents unknown number or text

Algebra Expression Algorithm

Mandy wanted to ask her friend Leo some algebra questions that can be solved by using the inverse method.

Mandy turned her algebra expression algorithm into a Scratch program using these blocks (may need more than 1)

She rolled a dice twice and wrote the number on slips of paper to use in her question.

4   6

`set a ▾ to 0`
`pick random 1 to 10`

She then thought of an algebra expression using these numbers and worked out the right answer using the inverse operation.

$$X - 4 = 6$$
$$X = 6 + 4$$
$$X = 10$$

`set x ▾ to 0`
`◯ + ◯` `a` `b`

Mandy presented her question to Leo using her slips of paper and the flipped answer card

$$X - 4 = 6$$

`ask ☐ and wait` `a`
`join hello world` `b`

Leo wrote his answer down on another slip of paper.

10

`answer`

Mandy compared Leos answer with her answer she had worked out previously. She had decided that if they were the same she would say correct and if they were different she would say wrong.

$$10 = 10$$

`if ⬡ then` `answer` `☐ = ☐` `x`
`else` `say Correct for 2 secs`

Algebra Expression Algorithm

Mandy wanted to ask her friend Leo some algebra questions that can be solved by using the inverse method.

Mandy turned her algebra expression algorithm into a Scratch program using these blocks

She rolled a dice twice and wrote the number on slips of paper to use in her question.
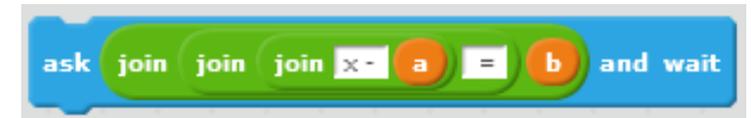
4   6

```
set a to pick random 1 to 4
set b to pick random 5 to 10
```

She then thought of an algebra expression using these numbers and worked out the right answer using the inverse operation.

X - 4 = 6
X = 6 + 4
X = 10

```
set x to b + a
```

Mandy presented her question to Leo using her slips of paper and the flipped answer card

X - 4 = 6

```
ask join join join x- a = b and wait
```

Leo wrote his answer down on another slip of paper.

10

Mandy compared Leos answer with her answer she had worked out previously. She had decided that if they were the same she would say correct and if they were different she would say wrong.

10 = 10

```
if answer = x then
  say Correct for 2 secs
else
  say Wrong for 2 secs
```