**The Zero Trick**

### Section A: Solve the following equations



1. 



1. 
2. 
3. 
4. 
5. 
6. 
7. \* 
8. \* 

### Section B

1. a. Factorise the expression 

b. Rewrite the equation  with the left hand side factorised using part a

c. Hence solve the equation.

1. a. Factorise  **fully**

b. Rewrite the equation  with the left hand side factorised

c. Hence solve the equation.

1. a. Factorise 

b. Rearrange the equation  so that it contains a zero on one side.

c. Rewrite the equation with the left hand side factorised.

d. Hence solve the equation

e. What made this equation harder to solve?

### Section C: Solve the following equations

1. 
2. 
3. 
4. What was different about the previous question?
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. What was different about the previous question?
13. 
14. 
15. 
16. 
17. 
18. 
19. 
20. 

### Section D

Example for 

















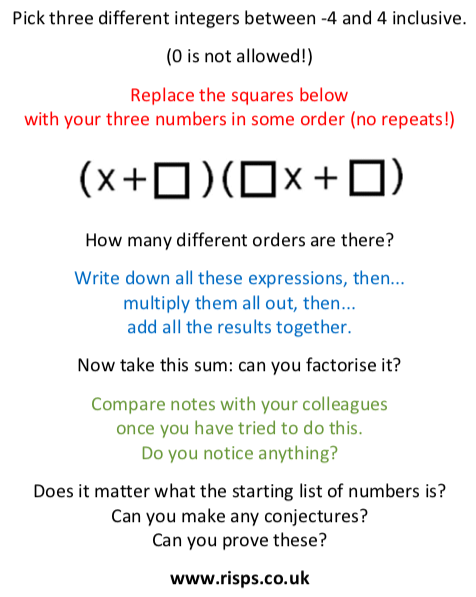
So the equation can be re-written as



Apply the same strategy to solve the following equations

1. 
2. 
3. 
4. 
5. Comment on the similarities and differences between the two previous questions.
6. 
7. 
8. 
9. 
10. 
11. 
12. 
13. 
14. 
15. 
16. 
17. 

### Section E: Investigation

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**The Zero Trick - Homework**

1. a. Factorise the expression 

b. Rewrite the equation  with the left hand side factorised

c. Hence solve the equation.

1. a. Factorise  **fully**

b. Rewrite the equation  with the left hand side factorised

c. Hence solve the equation.

Solve the following equations

1. 
2. 
3. 
4. 
5. 
6. 
7. \*
8. \*
9. \*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0, 5 | 0, 4, -4 | 0, 2 | 0, 2, -2 | 0, -2 | 0, 5 | 0, -2.2 | 0, 4 | 0, -3 | 0, 2.5 | 0, -4.5 |