KS1

What if...?

Maths Challenge Cards

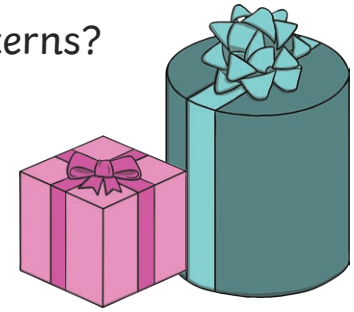
twinkl

1. What if you wanted to find out how many odd numbers there were on an advent calendar?

   - How will you start your investigation?
   - Have you spotted any patterns?
   - How can you check you have found all of the answers?

2. What if there were two, 2D shaped Christmas presents and the total number of sides added up to 7? Which two shapes would the presents be?

   - How will you start your investigation?
   - Have you spotted any patterns?
   - How can you check you have found all of the answers?



3. What if the number of presents under the tree added up to be a 2-digit number. If you add the two digits together, they would make 9? Which 2-digit number could represent the number of presents under the tree?

   - How will you start your investigation?
   - Have you spotted any patterns?
   - How can you check you have found all of the answers?

4. What if there was a box of chocolates containing white and milk chocolates. The total number of chocolates is 20. How many of each type of chocolates could there be?

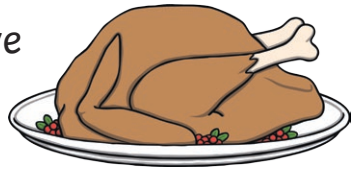
- How will you start your investigation?
- Have you spotted any patterns?
- How can you check you have found all of the answers?

5. What if on a Christmas tree, half of the decorations are blue. What might this look like?

- How will you start your investigation?
- Have you spotted any patterns?
- How can you check you have found all the answers?
- Can you find all the answers?

6. What if the total number of people coming for Christmas dinner is 10? There will be males and females. What different combinations of people could be coming?

- How will you start your investigation?
- Have you spotted any patterns?
- How can you check you have found all of the answers?



7. What if the answer is 28? What could the question be?

- How will you start your investigation?
- Have you spotted any patterns?
- How can you check you have found all of the answers?
- Can you find all the answers?

8. What if you had Christmas crackers with the numbers 1-20 on? You can only pull one odd and one even numbered cracker. Which number crackers could you pull?

   - How will you start your investigation?
   - Have you spotted any patterns?
   - How can you check you have found all of the answers?

9. What if the number of Christmas cards you had was a 2-digit number where the numbers multiplied together made 6 but added together make 5? How many Christmas cards could you have?

   - How will you start your investigation?
   - Have you spotted any patterns?
   - How can you check you have found all of the answers?

10. What if fifteen carrots were bought in the three days leading up to Christmas. A different number of carrots were bought every day. What different combinations could be bought?

    - How will you start your investigation?
    - Have you spotted any patterns?
    - Which method did you use to find the answer?

11. Create your own What if? Challenge card.

1. 1 ,3 ,5 7 ,9, 11, 13, 15, 17,19, 21, 23, (25 depending on the advent calendar)
2. Square and triangle, pentagon and semi-circle, hexagon and circle, rectangle and triangle, diamond and triangle
3. 3. 18, 27, 36, 45, 54, 63, 72, 81 ,90
4. 1 milk + 19 white, 2 milk + 18 white, 3 milk + 17 white, 4 milk + 16 white, 5 milk + 15 white, 6 milk + 14 white, 7 milk + 13 white, 8 milk + 12 white, 9 milk + 11 white, 10 milk + 10 white, 11 milk + 9 white, 12 milk + 8 white, 13 milk + 7 white, 14 milk + 6 white, 15 milk + 5 white, 16 milk + 4 white, 17 milk + 3 white, 18 milk + 2 white, 19 milk + 1 white (please lay this out in the most simple, eye catching manner)
5. Answers will vary

8. 1 + 2, 1 + 4, 1 + 6, 1 + 8, 1 + 10, 1 + 12, 1 + 14, 1 + 16, 1 + 18, 1 + 20
   2 + 3, 2 + 5, 2 + 7, 2 + 9, 2 + 11, 2 + 13, 2 + 15, 2 + 17, 2 + 19
   3 + 4, 3 + 6, 3 + 8, 3 + 10, 3 + 12, 3 + 14, 3 + 16, 3 + 18, 3 + 20
   4 + 5, 4 + 7, 4 + 9, 4 + 11, 4 + 13, 4 + 15, 4 + 17, 4 + 19
   5 + 6, 5 + 8, 5 + 10, 5 + 12, 5 + 14, 5 + 16, 5 + 18, 5 + 20
   6 + 7, 6 + 9, 6 + 11, 6 + 13, 6 + 15, 6 + 17, 6 + 19
   7 + 8, 7 + 10, 7 + 12, 7 + 14, 7 + 16, 7 + 18, 7 + 20
   8 + 9, 8 + 11, 8 + 13, 8 + 15, 8 + 17, 8 + 19
   9 + 10, 9 + 12, 9 + 14, 9 + 16, 9 + 18, 9 + 20
   10 + 11, 10 + 13, 10 + 15, 10 + 17, 10 + 19
   11 + 12, 11 + 14, 11 + 16, 11 + 18, 11 + 20
   12 + 13, 12 + 15, 12 + 17, 12 + 19
   13 + 14, 13 + 16, 13 + 18, 13 + 20
   14 + 15, 14 + 17, 14 + 19
   15 + 16, 15 + 18, 15 + 20
   16 + 17, 16 + 19
   17 + 18, 17 + 20
   18 + 19
   19 + 20

6. 1 male + 9 female,
   2 male + 8 female,
   3 male + 7 female,
   4 male + 6 female,
   5 male + 5 female,
   6 male + 4 female,
   7 male + 3 female,
   8 male + 2 female,
   9 male + 1 female
7. Answers will vary

9. 23
10. 12 2 1, 12 1 2, 1 2 12, 1 12 2, 2 1 12, 2 12 1
    11 3 1, 11 1 3, 1 3 11, 1 11 3, 3 11 1, 3 1 11
    10 4 1, 10 1 4, 1 4 10, 1 10 4, 4 10 1, 4 1 10
    10 3 2, 10 2 3, 2 3 10, 2 10 3, 3 2 10, 3 10 2
    9 5 1, 9 1 5, 1 5 9, 1 9 5, 5 1 9, 5 9 1
    9 4 2, 9 2 4, 2 4 9, 2 9 4, 4 2 9, 4 9 2
    8 6 1, 8 1 6, 6 8 1, 6 1 8, 1 6 8, 1 8 6
    8 5 2, 8 2 5, 2 5 8, 2 8 5, 5 2 8, 5 8 2
    8 4 3, 8 3 4, 3 4 8, 3 8 4, 4 8 3, 4 3 8
    7 6 2, 7 2 6, 2 6 7, 2 7 6, 6 7 2, 6 2 7
    7 5 3, 7 3 5, 3 5 7, 3 7 5, 5 3 7, 5 7 3
11. Answers will vary