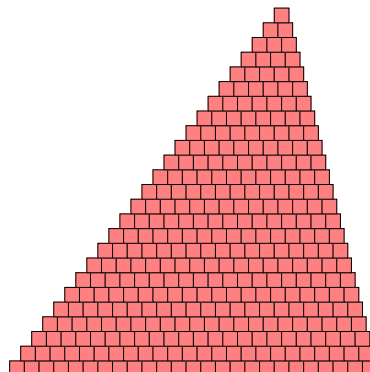
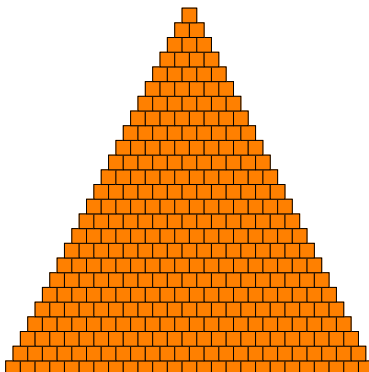
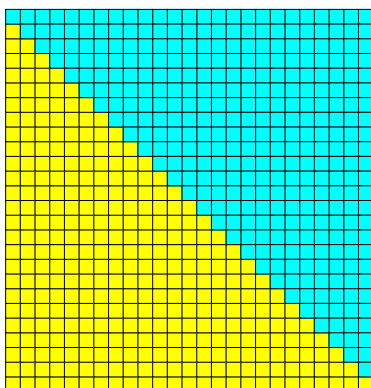


Arithmetic and geometry

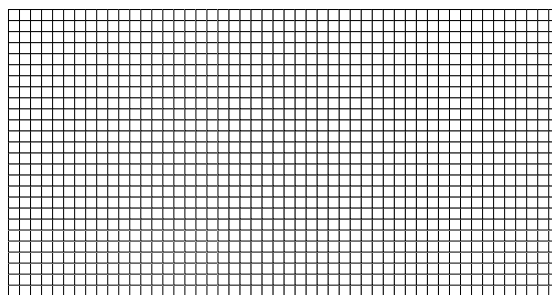
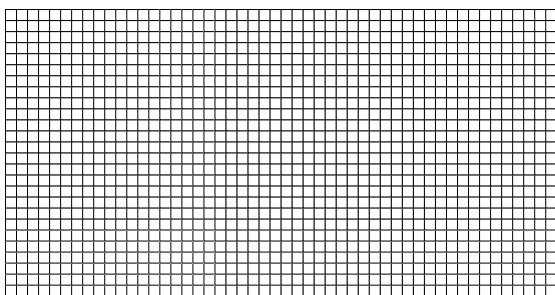
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1. Last week we figured out the sum of the first 25 counting numbers: $1 + 2 + 3 + \dots + 25 = 325$. Which of these pictures illustrate(s) this fact?



2. What is the sum of the first 25 positive even numbers?

3. Use the grids below to illustrate your answer to problem 2.

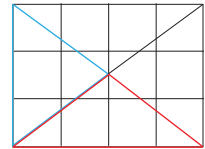


4. What is the sum of the first 25 positive numbers that are evenly divisible by 3?

5. What is the area of this rectangle? What is the area of the magenta triangle?



6. What is the area of the blue triangle? What is the area of the red triangle?

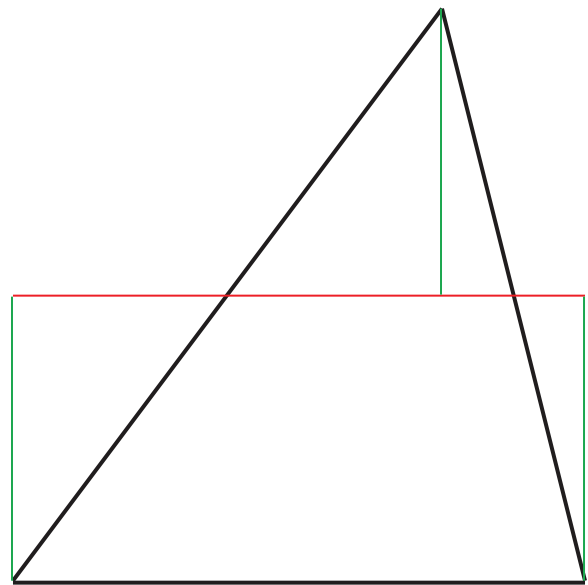


7. Two objects are *congruent* (*congruent*) if they are the same shape and size.

The red line goes through the middle of two of the sides of the black triangle. The green lines are perpendicular (*perpendiculaires*) to the red line; they form right angles (*les angles droits*). Which pairs of triangles are congruent?

If the black triangle is 4cm tall and 4cm wide, what is the area of the black, red and green rectangle?

What is the area of the black triangle?



8. Using the fact that the sum of the first 25 counting numbers is 325, and its connection to the area of a triangle, can you estimate the sum of the first 100 counting numbers?

