Studio of Engaging MathStudio of Engaging Mat

1. If a * b = 5 * (b - a), what is the value of 1*(2*(3*(4*5)))?



- 2. Jack's watch runs 3 minutes fast per hour, and John's watch runs 4 minutes late per hour. At noon, both kids set their watches according to the school clock (which is accurate) and agree to meet at the skating rink at half past three. How many minutes will Jack wait for John, if each comes to the skating rink exactly at 3:30 PM according to his watch?
- **3.** In the drawing class, the teacher created a figure from several identical cubes, and Frank and Gary drew it from two different points of view (see picture). How many cubes could there be in this figure? Specify the largest and smallest possible value.



4. If you increase the integer by 1, its square will decrease by 2017. Find this integer.



- 5. Nathan is creating a password for his smartphone. The password has 4 digits. Nathan does not like digits 6 and 9, so he does not use them. In addition, he wants to have at least two identical digits in the password. How many ways can Nathan do this?
- **6.** A height and a median from the same vertex of a triangle divide its angle into three equal parts. Find all angles of the triangle.

