Communication Channels Questions

1. On your current construction project the project manager is working with 7 other stakeholders --two new stakeholders join the project. How many new channels have been added?

   a. 17 channels

   b. 24 channels

   c. 28 channels

   d. 45 channels

   Solution

   The number of communication channels = n(n-1)/2, where n = number of stakeholders.

   For this question, the project manager is working with 7 other stakeholders. You add the PM to the team and that equates to 8 stakeholders.

   The number of communication channels = 8(7)/2 = 56/2 = 28 channels.

   Two new stakeholders join. Now there are 10 stakeholders.

   The number of communication channels = 10(9)/2= 90/2= 45 channels.

   We started with 28 channels with 8 people and now have 45 channels for 10 people.

   Subtract 28 from 45 and you get 17. That means 17 new channels were added.

2. A project team has 9 members. How many communication channels are there?

   a. 10

   b. 28

   c. 36

   d. 45

   Solution

   The number of communication channels = n(n-1)/2, where n = number of stakeholders.

   This question is also fairly straightforward. Since it's stating the "project team" has 9 members, the project manager is included in the total number of team members. So, you just plug in the number into the equation.

   The number of communication channels = 9(8)/2 = 72/2 = 36 channels.

3. You are managing an engineering project and 10 senior engineers are reporting to you. Your sponsor has asked you to add a team member. You hired 2 more senior engineers. How many communication channels will be added by this hiring?

   a. 21

   b. 23

   c. 55

   d. 78

Solution

The number of communication channels = n(n-1)/2, where n = number of stakeholders.

For this question, the project manager is working with 10 engineers. You add the PM to the team and that equates to 11. The total project team size is now 11.

The number of communication channels = 11(10)/2 = 110/2 = 55 channels.

Two new senior engineers were added. Now there are 13 team members.

The number of communication channels = 13(12)/2 = 156/2 = 78 channels.

We started with 55 channels with 11 people and now have 78 channels for 13 people.

Subtract 55 from 78 and you get 23. That means 23 new channels were added.

4. There are 23 stakeholders. What is the number of total potential communication channels in this project?

   a. 231

   b. 253

   c. 276

   d. 506

   Solution

   The number of communication channels = n(n-1)/2, where n = number of stakeholders.

   This question is straightforward. You know you have 23 stakeholders so just plug that number into the equation.

   The number of communication channels = 23(22)/2 = 506/2 = 253 channels.

5. A project team has 9 members. How many communication channels are there?

   a. 10

   b. 28

   c. 36

   d. 45

   Solution

   The number of communication channels = n(n-1)/2, where n = number of stakeholders.

   This question is also fairly straightforward. Since it's stating the "project team" has 9 members, the project manager is included in the total number of team members. So, you just plug in the number into the equation.

   The number of communication channels = 9(8)/2=72/2 = 36 channels.