Sprint 4: Use Operators and Conditional Constructs

Practice Challenge - 4.1 – Winner of the Tri-Series Cricket Tournament

In Australia, a tri-series, one-day international (ODI) cricket tournament is being contested by Australia, England and New Zealand. All three teams have played six round-robin matches. Now, the organisers have to determine the winner of the series. Each team is awarded 2 points for a match won, 1 point for a match that runs into a tie and no points for a lost match. The following table represents the scores obtained by each team.

	Australia	England	New Zealand
Won	2	3	4
Lost	2	2	2
Tie	2	1	1
Total Score	6	7	9

Write a program that accepts the total score of each team and displays the name of the winner team of the series.

Hint: Use Ternary Operator

Practice Challenge – 4.1 – Boilerplate URL

https://myrepos.stackroute.niit.com/core_java_boilerplates/sprint4_pc4.1

Practice Challenge - 4.2 – Aquarium Water pH Value

The chemical formula of water is H2O (2 hydrogen atoms + 1 Oxygen atom). The term pH is a measure of the hydrogen-ion concentration in water. The pH value ranges from 0 to 14, with 0 being the most acidic and 14 the most alkaline (basic). Neutral water has the pH value of 7.

For a goldfish to survive in an aquarium, the preferred pH value must range from 7 to 8. The pH value of an aquarium may change from time to time.

Write a program that takes the pH value of the aquarium water as an input and displays one of the following results.

1. If the pH value is below 7, display “pH value is low, partial water change required”.
2. If the value is in between 7 to 8, display “pH value is fine”.
3. If the value is greater than 8, display “pH value is high, partial water change required”.

Practice Challenge – 4.2 – Boilerplate URL

https://myrepos.stackroute.niit.com/core_java_boilerplates/sprint4_pc4.2

Practice Challenge - 4.3 – Fencing a Barn

Ron wishes to renovate his barn. He thinks that creating fences and keeping the animals separately would help him feed the animals easily and also solve the problem of animals getting mixed. For this, he plans to divide the area into three parts. He will create a square area for the chickens, a circular area for the ducks and a rectangular area for the cows.

Create a program in Java to help Ron calculate the area for each fence separately.

Note: Input 'side' for the square, 'length and breadth' for rectangle and 'radius' for circle.

Practice Challenge – 4.3 – Boilerplate URL
https://myrepos.stackroute.niit.com/core_java_boilerplates/sprint4_pc4.3