The association rules output in R includes the support for the entire rule, but not the support for the rhs individually. (Newer versions of the arules package include “coverage,” which is the support of the lhs.) However, it is possible to calculate rhs support using other numbers in the output. It is also possible to calculate lhs support if you do not see a column called “coverage.”

To get the rhs support, we can take advantage of our knowledge of how lift is calculated:

**Lift = Confidence / Support of rhs**

and to get the lhs support, we use the calculation for support of the entire rule:

**Support of Entire Rule = Support of lhs \* Confidence**

Rearranging each of those equations, we get:

**Support of rhs = Confidence / Lift**

and:

**Support of lhs = Support of Entire Rule / Confidence**

Suppose we have the following association rules:

lhs rhs support confidence lift count

[1] {bread} => {ice cream} 0.15000000 0.3000000 1.2000000 3000   
[2] {donuts} => {kale} 0.01000000 0.0500000 0.5000000 200

1. What is the support of ice cream?

2. What is the support of bread?

3. What is the support of donuts?

4. What is the support of kale?

**Solutions:**

1. What is the support of ice cream?

Support of rhs = confidence / lift = 0.3 / 1.2 = **0.25**

2. What is the support of bread?

Support of lhs = support of entire rule / confidence = 0.15 / 0.30 = **0.5**

3. What is the support of donuts?

Support of lhs = support of entire rule / confidence = 0.01 / 0.05 = **0.2**

4. What is the support of kale?

Support of rhs = confidence / lift = 0.05 / 0.5 = **0.1**