

2007.03.21

Copyright © 2007 Mohammad-Reza Mehdinia

All rights reserved.

Here I show the values obtained from the side of squares. When using the side of the square in the formulae it gives you the following: Q , $4Q$ & $2R$. Remember that I have divided the squares in three groups. For further information see pages 51-56 and 94, 102 in the book.

Every square gives five different values or constants. With the help of these constants we can identify a circle that is related to the square used in the formulae.

When selecting a square regard its area and/or perimeter as 100%. When using the square in the formulae you obtain Q , $4Q$ and $2R$. When you multiply $Q * 2R$ it gives you 1. 1 is the square in group two

When multiplying $4Q * 2R$ it gives you 4 which is the side of square-squaring form. For examples see group 1, 2 and 3 below.

$$Q * 2R = 1$$

$$4Q * 2R = 4$$

1. If we imagine a square's perimeter and/or its area as $1 = 100\%$ in the formula, its circle's circumference and/or area is always $Q\%$ of the square: $Q * 2R = 1$
2. Now, if the circle's circumference and/or area is $Q\%$ of its square, the square is $2R$,
 $4Q * 2R = 4$

As one can see above, you can calculate the perimeter, the circumference, the area, the side and the diameter of a circle from a square and vice versa. When you choosing a square, one has to know in which group the square belongs to. The circle you obtain is in the same group as the square.

Note, when we chose a circle, its diameter is even side of a square which the side is equal the diameter. When the diameter is equal the side the circle is an inner-circle for the square. When we use $\pi = 3.141$ to figure out the circle area or circumference we figure out a part of the square. It is easy to understand the square-squaring form has side of 4, if you use values of π you take 3.141... part of the 4. When we construe a circle with 3.141... that is never been an inner-circle for any square.

Group I

Note, all squares in group **one** have Circumference > Area.

A square with the side 1.5 u.l in the formulae gives the values below.

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 1.5 = (\ln \sqrt{1.5^2 * 2} / \ln 1.5)^2 / 2 = 1.720059253$$

$$4Q \text{ of } 1.5 = (\ln \sqrt{1.5^2 * 2} / \ln 1.5^2 * 2 = 6.88023701$$

$$2R \text{ of } 1.5 = (\ln 1.5 / \ln \sqrt{1.5^2 * 2})^2 * 2 = 0.5813753209$$

$$R \text{ of } 1.5 = (\ln 1.5 / \ln \sqrt{1.5^2 * 2})^2 = 0.2906876605$$

$$B \text{ of } 1.5 = 1 - (\ln \sqrt{1.5^2 * 2} / \ln 1.5)^2 / 2 = -0.7200592526$$

$$\text{Radius} = s * R$$

Note, that the results of the formulae are 1 and 4.

$$Q * 2R = 1.720059253 * 0.5813753209 = 1$$

$$4Q * 2R = 6.88023701... * 0.5813753209 = 4$$

Notice: squares in group **one** have Area < Circumference. The side of the square is 1.5 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\text{Area with } Q \text{ of a square with the side } 1.5: d^2 * Q = 8^2 * 1.720059253 = 110.0837922$$

$$\text{Area with } 4Q \text{ of a square with the side } 1.5: (8/2)^2 * 6.88023701... = 110.0837922$$

$$\text{Area with } 2R \text{ of a square with the side } 1.5: 8^2 / 0.5813753209... = 110.0837922$$

$$\text{Area with } B \text{ of a square with the side } 1.5: 8^2 - (8^2 * -0.7200592526) = 110.0837922$$

Notice: squares in group **one** have Circumference > Area. The side of the square is 1.5 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\text{Circumference with } Q \text{ of a square with the side } 1.5: 4d * Q = 4 * (8 * 1.720059253) = 55.0418961$$

$$\text{Circumference with } 4Q \text{ of a square with the side } 1.5: 8 * 6.88023701... \\ = 55.0418961$$

$$\text{Circumference with } 2R \text{ of a square with the side } 1.5: 4 * (8 / 0.5813753209) \\ = 55.0418961$$

$$\text{Circumference with } B \text{ of a square with the side } 1.5: 4d - (4d * 0.7200592526) = 55.0418961$$

Group I

Note, all squares in group **one** have Circumference > Area.

A square with the side 2.0 u.l in the formulae gives the values below.

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 2.0 = (\ln \sqrt{2.0^2 * 2} / \ln 2.0)^2 / 2 = 1.125$$

$$4Q \text{ of } 2.0 = (\ln \sqrt{2.0^2 * 2} / \ln 2.0^2 * 2) = 4.5$$

$$2R \text{ of } 2.0 = (\ln 2.0 / \ln \sqrt{2.0^2 * 2})^2 * 2 = 0.8888888...$$

$$R \text{ of } 2.0 = (\ln 2.0 / \ln \sqrt{2.0^2 * 2})^2 = 0.4444444...$$

$$B \text{ of } 2.0 = 1 - (\ln \sqrt{2.0^2 * 2} / \ln 2.0)^2 / 2 = -0.125$$

$$\text{Radius} = s * R$$

Note, when you multiplying the values you again obtain 1 and 4.

$$Q * 2R = 1.125 * 0.8888888... = 1$$

$$4Q * 2R = 4.5 * 0.8888888... = 4$$

Notice: squares in group **one** have Area < Circumference. The side of the square is 2.0 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\text{Area with } Q \text{ of a square with the side 2: } d^2 * Q = 8^2 * 1.125 = 72$$

$$\text{Area with } 4Q \text{ of a square with the side 2: } (8/2)^2 * 4.5 = 72$$

$$\text{Area with } 2R \text{ of a square with the side 2: } 8^2 / 0.8888888 = 72$$

$$\text{Area with } B \text{ of a square with the side 2: } 8^2 - (8^2 * -0.125) = 72$$

Notice: squares in group **one** have Circumference > Area. The side of the square is 2.0 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\text{Circumference with } Q \text{ of a square with the side 2: } 4d * Q = 4*(8* 1.125) = 36$$

$$\text{Circumference with } 4Q \text{ of a square with the side 2: } 8 * 4.5 = 36$$

$$\text{Circumference with } 2R \text{ of a square with the side 2: } 4*(8 / 0.8888888) = 36$$

$$\text{Circumference with } B \text{ of a square with the side 2: } 4d - (4d * -0.125) = 36$$

Group I

Note, all squares in group **one** have Circumference > Area.

A square with the side 3.0 u.l in the formulae gives the values below.

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 3.0 = (\ln \sqrt{3.0^2 * 2} / \ln 3.0)^2 / 2 = 0.865223921$$

$$4Q \text{ of } 3.0 = (\ln \sqrt{3.0^2 * 2} / \ln 3.0^2 * 2) = 3.460895684$$

$$2R \text{ of } 3.0 = (\ln 3.0 / \ln \sqrt{3.0^2 * 2})^2 * 2 = 1.155770172$$

$$R \text{ of } 3.0 = (\ln 3.0 / \ln \sqrt{3.0^2 * 2})^2 = 0.577885086$$

$$B \text{ of } 3.0 = 1 - (\ln \sqrt{3.0^2 * 2} / \ln 3.0)^2 / 2 = 0.134776079$$

$$\text{Radius} = s * R$$

Note, the results here are again 1 and 4.

$$Q * 2R = 0.865223921 * 1.155770172 = 1$$

$$4Q * 2R = 3.460895684... * 1.155770172 = 4$$

Notice: squares in group **one** have Area < Circumference. The side of the square is 3.0 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\begin{aligned} \text{Area with } Q \text{ of a square with the side } 3: d^2 * Q &= 8^2 * 0.865223921 \\ &= 55.37433094 \end{aligned}$$

$$\begin{aligned} \text{Area with } 4Q \text{ of a square with the side } 3: (8/2)^2 * 3.460895684... \\ &= 55.37433094 \end{aligned}$$

$$\text{Area with } 2R \text{ of a square with the side } 3: 8^2 / 1.155770172 = 55.37433094$$

$$\begin{aligned} \text{Area with } B \text{ of a square with the side } 3: 8^2 - (8^2 * 0.134776079) \\ &= 55.37433094 \end{aligned}$$

Notice: squares in group **one** have Circumference > Area. The side of the square is 3.0 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\text{Circumference with } Q \text{ of a square with the side } 3: 4d * Q = 4 * (8 * 0.865223921) = 27.68716547$$

$$\begin{aligned} \text{Circumference with } 4Q \text{ of a square with the side } 3: 8 * 3.460895684... \\ &= 27.68716547 \end{aligned}$$

$$\begin{aligned} \text{Circumference with } 2R \text{ of a square with the side } 3: 4 * (8 / 1.155770172) \\ &= 27.68716547 \end{aligned}$$

$$\begin{aligned} \text{Circumference with } B \text{ of a square with the side } 3: 4d - (4d * 0.134776079) \\ &= 27.68716547 \end{aligned}$$

Group I

Note, all squares in group **one** have Circumference > Area.

A square with the side 3.5 u.l in the formulae gives the values below.

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 3.5 = (\ln \sqrt{3.5^2 * 2} / \ln 3.5)^2 / 2 = 0.8149142637$$

$$4Q \text{ of } 3.5 = (\ln \sqrt{3.5^2 * 2} / \ln 3.5^2 * 2) = 3.259657055$$

$$2R \text{ of } 3.5 = (\ln 3.5 / \ln \sqrt{3.5^2 * 2})^2 * 2 = 1.227122956$$

$$R \text{ of } 3.5 = (\ln 3.5 / \ln \sqrt{3.5^2 * 2})^2 = 0.6135614779$$

$$B \text{ of } 3.5 = 1 - (\ln \sqrt{3.5^2 * 2} / \ln 3.5)^2 / 2 = 0.1850857363$$

$$\text{Radius} = s * R$$

Note, the results are again 1 and 4.

$$Q * 2R = 0.8149142637... * 1.227122956... = 1$$

$$4Q * 2R = 3.259657055... * 1.227122956... = 4$$

Notice: squares in group **one** have Area < Circumference. The side of the square is 3.5 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\begin{aligned} \text{Area with } Q \text{ of a square with the side 3.5: } & d^2 * Q = 8^2 * 0.8149142637... \\ & = 52.15451288 \end{aligned}$$

$$\begin{aligned} \text{Area with } 4Q \text{ of a square with the side 3.5: } & (8/2)^2 * 3.259657055... \\ & = 52.15451288 \end{aligned}$$

$$\begin{aligned} \text{Area with } 2R \text{ of a square with the side 3.5: } & 8^2 / 1.227122956... \\ & = 52.15451288 \end{aligned}$$

$$\begin{aligned} \text{Area with } B \text{ of a square with the side 3.5: } & 8^2 - (8^2 * 0.1850857363) \\ & = 52.15451288 \end{aligned}$$

Notice: squares in group **one** have Circumference > Area. The side of the square is 3.5 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\text{Circumference with } Q \text{ of a square with the side 3.5: } 4d * Q = 4 * (8 * 0.8149142...) = 26.077256$$

$$\begin{aligned} \text{Circumference with } 4Q \text{ of a square with the side 3.5: } & 8 * 3.259657055... \\ & = 26.077256 \end{aligned}$$

$$\begin{aligned} \text{Circumference with } 2R \text{ of a square with the side 3.5: } & 4 * (8 / 1.227122956...) \\ & = 26.077256 \end{aligned}$$

$$\text{Circumference with } B \text{ of a square with the side 3.5: } 4d - (4d * 0.1850857363) = 26.077256$$

This section argues around 3.141592653...

Group I

Notice, all squares in group **one** have Circumference > Area.

A square with the side 3.928105767 u.l in the formulae gives us the following values :

0.7853981634, 3.141592653, 1.273239545, 0.2146018366

See below :

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 3.928105767 = (\ln \sqrt{3.928105767^2 * 2} / \ln 3.928105767)^2 / 2 = 0.7853981634...$$

$$4Q \text{ of } 3.928105767 = (\ln \sqrt{3.928105767^2 * 2} / \ln 3.928105767^2 * 2)^2 = 3.141592653...$$

$$2R \text{ of } 3.928105767 = (\ln 3.928105767 / \ln \sqrt{3.928105767^2 * 2})^2 * 2 = 1.273239545...$$

$$R \text{ of } 3.928105767 = (\ln 3.928105767 / \ln \sqrt{3.928105767^2 * 2})^2 = 0.6366197724...$$

$$B \text{ of } 3.928105767 = 1 - (\ln \sqrt{3.928105767^2 * 2} / \ln 3.928105767)^2 / 2 = 0.2146018366...$$

$$\text{Radius} = s * R$$

Note, again here when you multiply the values you obtain 1 and 4.

$$Q * 2R = 0.7853981634... * 1.273239545... = 1$$

$$4Q * 2R = 3.141592653... * 1.273239545... = 4$$

Remember:

When you see the number 3.141592653 it gives you a square with the side 3.928105767 u.l.

Notice: squares in group **one** have Area < Circumference. The side of the square is 3.928105767 u.l. We use a circle with the diameter 8 u.l. and its area is:

$$\text{Area with } Q \text{ of a square with the side } 3.928105767: d^2 * Q = 8^2 * 0.7853981634 = 50.26548246...$$

$$\text{Area with } 4Q \text{ of a square with the side } 3.928105767: (8/2)^2 * 3.141592653... \\ = 50.26548246...$$

$$\text{Area with } 2R \text{ of a square with the side } 3.928105767: 8^2 / 1.273239545... \\ = 50.26548246...$$

$$\text{Area with } B \text{ of a square with the side } 3.928105767: 8^2 - (8^2 * 0.2146018366...) = 50.26548246...$$

Notice: squares in group **one** have Circumference > Area. The side of the square is 3.928105767 u.l. We use a circle with the diameter 8 u.l and its circumference is:

Circumference with Q of a square with the side 3.928105767: $4d * Q = 4 * (8 * 0.7853981634...) = 25.13274123...$

Circumference with $4Q$ of a square with the side 3.928105767: $8 * 3.141592653... = 25.13274123...$

Circumference with $2R$ of a square with the side 3.928105767: $4 * 8 / 1.273239545... = 25.13274123...$

Circumference with B of a square with the side 3.928105767: $4d - (4d * 0.2146018366...) = 25.13274123...$

Now you can see that the formulae always give the results 1 and 4. This is also the case when you use 3.141..., **1** represents the only square in group two and the **4** represents the side of the “square-squaring form” in the squares-grading system.

$$Q * 2R = 0.7853981634... * 1.273239545... = 1$$

$$4Q * 2R = 3.141592653... * 1.273239545... = 4$$

Remember:

When you see the square with the side 3.928105767 u.l always think of 3.141592653.

Note, only the square of 4 in the formulae produce 0.78125. 3.125. 1.28 & 0.21875.

See below

Group II

Note, only a square in group **two**, which has Circumference = Area.

A square of the 4 u.l puts in the formulae and we obtain values like below.

Remember these values produces of a square with side of the 4 u.l.

$$M = (\ln \sqrt{(e^{\ln 5})^2 * 2} / \ln e^{\ln 5})^2 / 2.$$

$$Q \text{ of } 4 = (\ln \sqrt{4^2 * 2} / \ln 4)^2 / 2 = 0.78125$$

$$4Q \text{ of } 4 = (\ln \sqrt{4^2 * 2} / \ln 4^2 * 2 = 3.125$$

$$2R \text{ of } 4 = (\ln 4 / \ln \sqrt{4^2 * 2})^2 * 2 = 1.28$$

$$R \text{ of } 4 = (\ln 4 / \ln \sqrt{4^2 * 2})^2 = 0.64$$

$$B \text{ of } 4 = 1 - (\ln \sqrt{4^2 * 2} / \ln 4)^2 / 2 = 0.21875$$

$$\text{Radius} = s * R$$

Note: when you multiply the values you obtain the number of 1 and 4. 1 means 100% of the area and the circumference of the square and the circle in group two and 4 is the side of the “square-squaring form” in the squares-grading system.

The Q of 4 is named M and the number of M is 0.78125.

$$Q * 2R = 0.78125 * 1.28 = 1$$

$$4Q * 2R = 3.125 * 1.28 = 4$$

or

$$M * 2R = 0.78125 * 1.28 = 1$$

$$4M * 2R = 3.125 * 1.28 = 4$$

Notice: square in group **two** has Area = circumference. The side of the square is 4 u.l.

We select a circle with the diameter 8 u.l. and its area is:

$$\text{Area with } Q \text{ of a square with the side 4: } d^2 * M = 8^2 * 0.78125 = 50$$

$$\text{Area with } 4Q \text{ of a square with the side 4: } (8/2)^2 * 3.125 = 50$$

$$\text{Area with } 2R \text{ of a square with the side 4: } 8^2 / 1.28 = 50$$

$$\text{Area with } B \text{ of a square with the side 4: } 8^2 - (8^2 * 0.21875) = 50$$

Notice: square in group **two** has circumference = area. The side of the square is 4 u.l.

We select a circle with the diameter 8 u.l and its circumference is:

The Q of 4 is named M and the number of M is 0.78125

Circumference with Q of a square with the side 4: $4d * M = 4 * (8 * 0.78125) = 25$

Circumference with $4M$ of a square with the side 4: $8 * 3.125 = 25$

Circumference with $2R$ of a square with the side 4: $4 * (8 / 1.28) = 25$

Circumference with B of a square with the side 4: $4d - (4d * 0.21875) = 25$

1. Here I show some values which are obtained of some square sides that put in formulae. The squares are in groups I. II and III. Look at the values on the pages 51-56 of the book (to view the book).
 2. Note: when you multiply values you obtain the number of 1 and 4. Thought able is the numbers of **4** and **1**. With the 1 means a complete of 100% of area and/or circumference which the square and the circle in group two, and the 4 sign to the square of 4 which is the Square-squaring form.
-

Group III

Note, all squares in group **three** have Circumference < Area.

A square with the side 5 u.l in the formulae gives the values below

$$Q = (\ln \sqrt{(e^{\ln 5})^2 * 2} / \ln e^{\ln 5})^2 / 2.$$

$$Q \text{ of } 5.0 = (\ln \sqrt{5.0^2 * 2} / \ln 5.0)^2 / 2 = 0.7385235662$$

$$4Q \text{ of } 5.0 = (\ln \sqrt{5.0^2 * 2} / \ln 5.0^2 * 2 = 2.954094265$$

$$2R \text{ of } 5.0 = (\ln 5.0 / \ln \sqrt{5.0^2 * 2})^2 * 2 = 1.354052932$$

$$R \text{ of } 5.0 = (\ln 5.0 / \ln \sqrt{5.0^2 * 2})^2 = 0.6770264658$$

$$B \text{ of } 5.0 = 1 - (\ln \sqrt{5.0^2 * 2} / \ln 5.0)^2 / 2 = 0.2614764338$$

$$\text{Radius} = s * R$$

Note, when you multiplying the values you again obtain **1** and **4**. See below

$$Q * 2R = 0.7385235662... * 1.354052932 = 1$$

$$4Q * 2R = 2.954094265... * 1.354052932 = 4$$

Notice: squares in group **three** have Area > circumference. The side of the square is 5 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\begin{aligned} \text{Area with } Q \text{ of a square with the side 5: } & d^2 * Q = 8^2 * 0.7385235662... \\ & = 47.26550824... \end{aligned}$$

$$\begin{aligned} \text{Area with } 4Q \text{ of a square with the side 5: } & (8/2)^2 * 2.954094265... \\ & = 47.26550824... \end{aligned}$$

$$\begin{aligned} \text{Area with } 2R \text{ of a square with the side 5: } & 8^2 / 1.354052932... \\ & = 47.26550824... \end{aligned}$$

$$\begin{aligned} \text{Area with } B \text{ of a square with the side 5: } & 8^2 - (8^2 * 0.2614764338...) \\ & = 47.26550824... \end{aligned}$$

Notice: squares in group **three** have circumference < area. The side of the square is 5 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\begin{aligned} \text{Circumference with } Q \text{ of a square with the side 5: } & 4d * Q = 4 * (8 * 0.73852356...) = \\ & 23.63275412... \end{aligned}$$

$$\begin{aligned} \text{Circumference with } 4Q \text{ of a square with the side 5: } & 8 * 2.954094265... \\ & = 23.63275412... \end{aligned}$$

$$\begin{aligned} \text{Circumference with } 2R \text{ of a square with the side 5: } & 4 * (8 / 1.354052932...) \\ & = 23.63275412... \end{aligned}$$

Circumference with B of a square with the side 5: $4d - (4d * 0.2614764338...) = 23.63275412...$

Group III

Note, all squares in group **three** have Circumference < Area.

A square with the side 10 u.l in the formulae gives the values below

$$Q = (\ln \sqrt{(e^{\ln 5})^2 * 2} / \ln e^{\ln 5})^2 / 2.$$

$$Q \text{ of } 10 = (\ln \sqrt{10^2 * 2} / \ln 10)^2 / 2 = 0.6618423801...$$

$$4Q \text{ of } 10 = (\ln \sqrt{10^2 * 2} / \ln 10^2 * 2) = 2.64736952...$$

$$2R \text{ of } 10 = (\ln 10 / \ln \sqrt{10^2 * 2})^2 * 2 = 1.510933766...$$

$$R \text{ of } 10 = (\ln 10 / \ln \sqrt{10^2 * 2})^2 = 0.7554668831...$$

$$B \text{ of } 10 = 1 - (\ln \sqrt{10^2 * 2} / \ln 10)^2 / 2 = 0.3381576199...$$

$$\text{Radius} = s * R$$

Note, when you multiplying the values you again obtain **1** and **4**. See below

$$Q * 2R = 0.6618423801... * 1.510933766... = 1$$

$$4Q * 2R = 2.64736952... * 1.510933766... = 4$$

Notice: squares in group **three** have Area > circumference. The side of the square is 10 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\begin{aligned} \text{Area with } Q \text{ of a square with the side } 10: & d^2 * Q = 8^2 * 0.6618423801... \\ & = 42.35791233... \end{aligned}$$

$$\begin{aligned} \text{Area with } 4Q \text{ of a square with the side } 10: & (8/2)^2 * 2.64736952... \\ & = 42.35791233... \end{aligned}$$

$$\begin{aligned} \text{Area with } 2R \text{ of a square with the side } 10: & 8^2 / 1.510933766... \\ & = 42.35791233... \end{aligned}$$

$$\begin{aligned} \text{Area with } B \text{ of a square with the side } 10: & 8^2 - (8^2 * 0.3381576199...) \\ & = 42.35791233... \end{aligned}$$

Notice: squares in group **three** have circumference < area. The side of the square is 10 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\begin{aligned} \text{Circumference with } Q \text{ of a square with the side } 10: & 4d * Q = 4 * (8 * 0.66184238...) = \\ & 21.17895616... \end{aligned}$$

$$\begin{aligned} \text{Circumference with } 4Q \text{ of a square with the side } 10: & 8 * 2.64736952... \\ & = 21.17895616... \end{aligned}$$

$$\text{Circumference with } 2R \text{ of a square with the side } 10: 4 * (8 / 1.510933766...)$$

$$= 21.17895616\dots$$

$$\text{Circumference with } B \text{ of a square with the side } 10: 4d - (4d * 0.3381576199\dots) = 21.17895616\dots$$

Group III

Note, all squares in group **three** have Circumference < Area.

A square with the side 150 u.l in the formulae gives the values below

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 150 = (\ln \sqrt{150^2 * 2} / \ln 150)^2 / 2 = 0.5715596726\dots$$

$$4Q \text{ of } 150 = (\ln \sqrt{150^2 * 2} / \ln 150^2 * 2) = 2.28623869\dots$$

$$2R \text{ of } 150 = (\ln 150 / \ln \sqrt{150^2 * 2})^2 * 2 = 1.749598595\dots$$

$$R \text{ of } 150 = (\ln 150 / \ln \sqrt{150^2 * 2})^2 = 0.8747992974\dots$$

$$B \text{ of } 150 = 1 - (\ln \sqrt{150^2 * 2} / \ln 150)^2 / 2 = 0.4284403274\dots$$

$$\text{Radius} = s * R$$

Note, when you multiplying the values you again obtain **1** and **4**. See below

$$Q * 2R = 0.5715596726\dots * 1.749598595\dots = 1$$

$$4Q * 2R = 2.28623869\dots * 1.749598595\dots = 4$$

Notice: squares in group **three** have Area > circumference. The side of the square is 150 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\text{Area with } Q \text{ of a square with the side } 150: d^2 * Q = 8^2 * 0.5715596726\dots$$

$$= 36.57981905\dots$$

$$\text{Area with } 4Q \text{ of a square with the side } 150: (8/2)^2 * 2.28623869\dots$$

$$= 36.57981905\dots$$

$$\text{Area with } 2R \text{ of a square with the side } 150: 8^2 / 1.749598595\dots$$

$$= 36.57981905\dots$$

$$\text{Area with } B \text{ of a square with the side } 150: 8^2 - (8^2 * 0.4284403274\dots)$$

$$= 36.57981905\dots$$

Notice: squares in group **three** have circumference < area. The side of the square is 150 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\text{Circumference with } Q \text{ of a square with the side } 150: 4d * Q = 4 * (8 * 0.5715596726) = 18.28990952\dots$$

$$= 18.28990952\dots$$

$$\text{Circumference with } 4Q \text{ of a square with the side } 150: 8 * 2.28623869\dots$$

$$= 18.28990952\dots$$

Circumference with $2R$ of a square with the side 150: $4 * (8 / 1.749598595\dots)$
 $= 18.28990952\dots$

Circumference with B of a square with the side 150: $4d - (4d * 0.4284403274) = 18.28990952\dots$

Group III

Note, all squares in group **three** have Circumference < Area.

A square with the side 1642 u.l in the formulae gives the values below

$$Q = (\ln \sqrt{(e^{\ln s})^2 * 2} / \ln e^{\ln s})^2 / 2.$$

$$Q \text{ of } 1642 = (\ln \sqrt{1642^2 * 2} / \ln 1642)^2 / 2 = 0.5479066886\dots$$

$$4Q \text{ of } 1642 = (\ln \sqrt{1642^2 * 2} / \ln 1642^2 * 2) = 2.191626755\dots$$

$$2R \text{ of } 1642 = (\ln 1642 / \ln \sqrt{1642^2 * 2})^2 * 2 = 1.825128294\dots$$

$$R \text{ of } 1642 = (\ln 1642 / \ln \sqrt{1642^2 * 2})^2 = 0.9125641471\dots$$

$$B \text{ of } 1642 = 1 - (\ln \sqrt{1642^2 * 2} / \ln 1642)^2 / 2 = 0.4520933114\dots$$

$$\text{Radius} = s * R$$

Note, when you multiplying the values you again obtain **1** and **4**. See below

$$Q * 2R = 0.5479066886\dots * 1.825128294\dots = 1$$

$$4Q * 2R = 2.191626755\dots * 1.825128294\dots = 4$$

Notice: squares in group **three** have Area > circumference. The side of the square is 1642 u.l. We use a circle with the diameter 8 u.l and its area is:

$$\text{Area with } Q \text{ of a square with the side } 1642: d^2 * Q = 8^2 * 0.5479066886\dots \\ = 35.06602807\dots$$

$$\text{Area with } Q \text{ of a square with the side } 1642: (8/2)^2 * 2.191626755\dots \\ = 35.06602807\dots$$

$$\text{Area with } Q \text{ of a square with the side } 1642: 8^2 / 1.825128294\dots \\ = 35.06602807\dots$$

$$\text{Area with } Q \text{ of a square with the side } 1642: 8^2 - (8^2 * 0.4520933114\dots) \\ = 35.06602807\dots$$

Notice: squares in group **three** have circumference < area. The side of the square is 1642 u.l. We use a circle with the diameter 8 u.l and its circumference is:

$$\text{Circumference with } Q \text{ of a square with the side } 1642: 4d * Q = 4 * (8 * 0.5479066886) = \\ 17.53301404$$

$$\text{Circumference with } 4Q \text{ of a square with the side } 1642: 8 * 2.191626755\dots$$

= 17.53301404...

Circumference with $2R$ of a square with the side 1642: $4 * (8 / 1.825128294\dots) = 17.53301404\dots$

Circumference with B of a square with the side 1642: $4d - (4d * 0.4520933114) = 17.53301404\dots$