

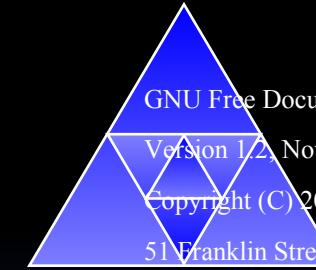
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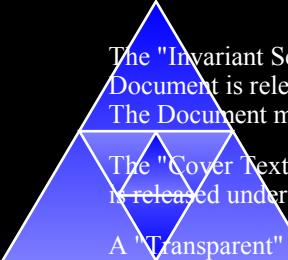
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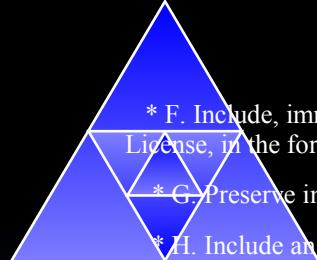
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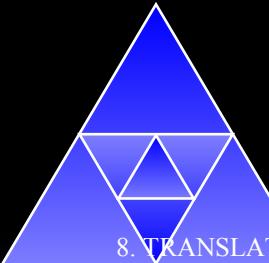
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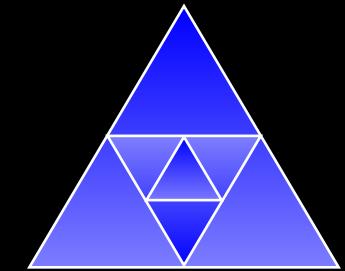
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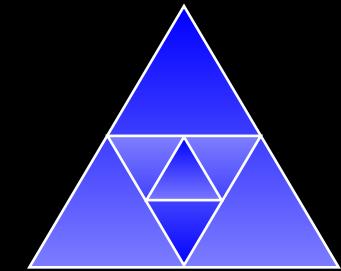
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# Beauty and Harmony through Mathematics

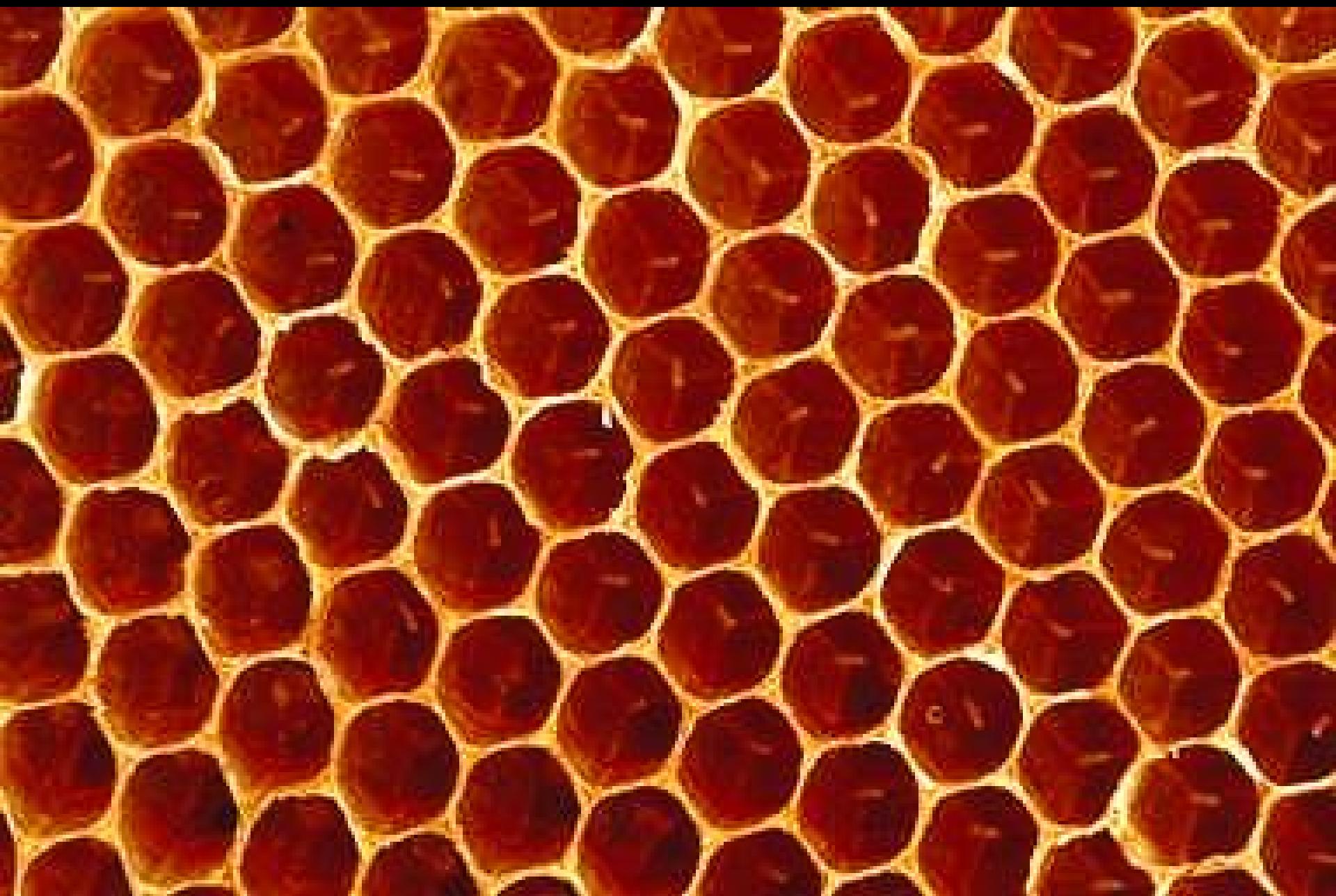
Vern Poythress



## Theme: God's Wisdom

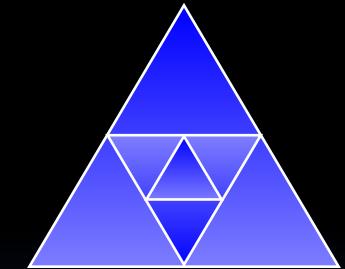
The LORD by wisdom founded the earth;  
by understanding he established the heavens;  
by his knowledge the deeps broke open,  
and the clouds drop down the dew.

--Proverbs 3:19-20









# Newton's Law of Gravitation

proportion:  
gravitational constant

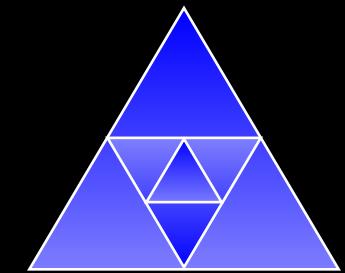
proportion:  
mass of earth

proportion:  
mass of ball

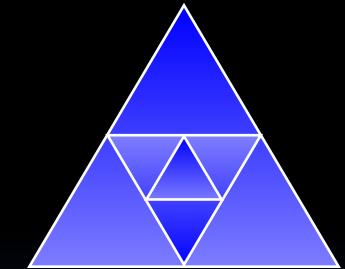
force of  
gravity

proportion:  
distance

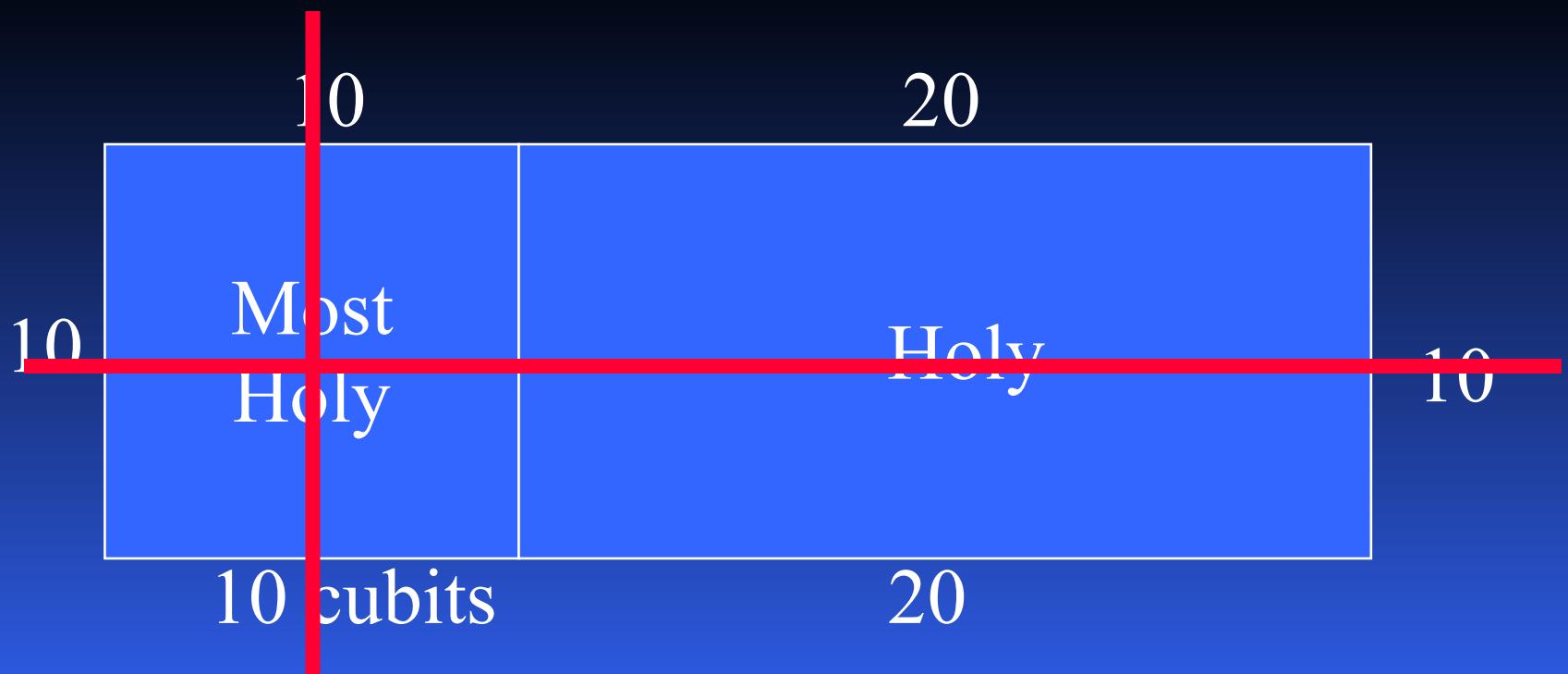
$$F = \frac{GMm}{r^2}$$

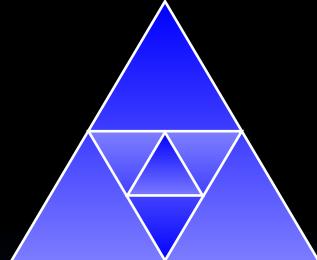


# Symmetry

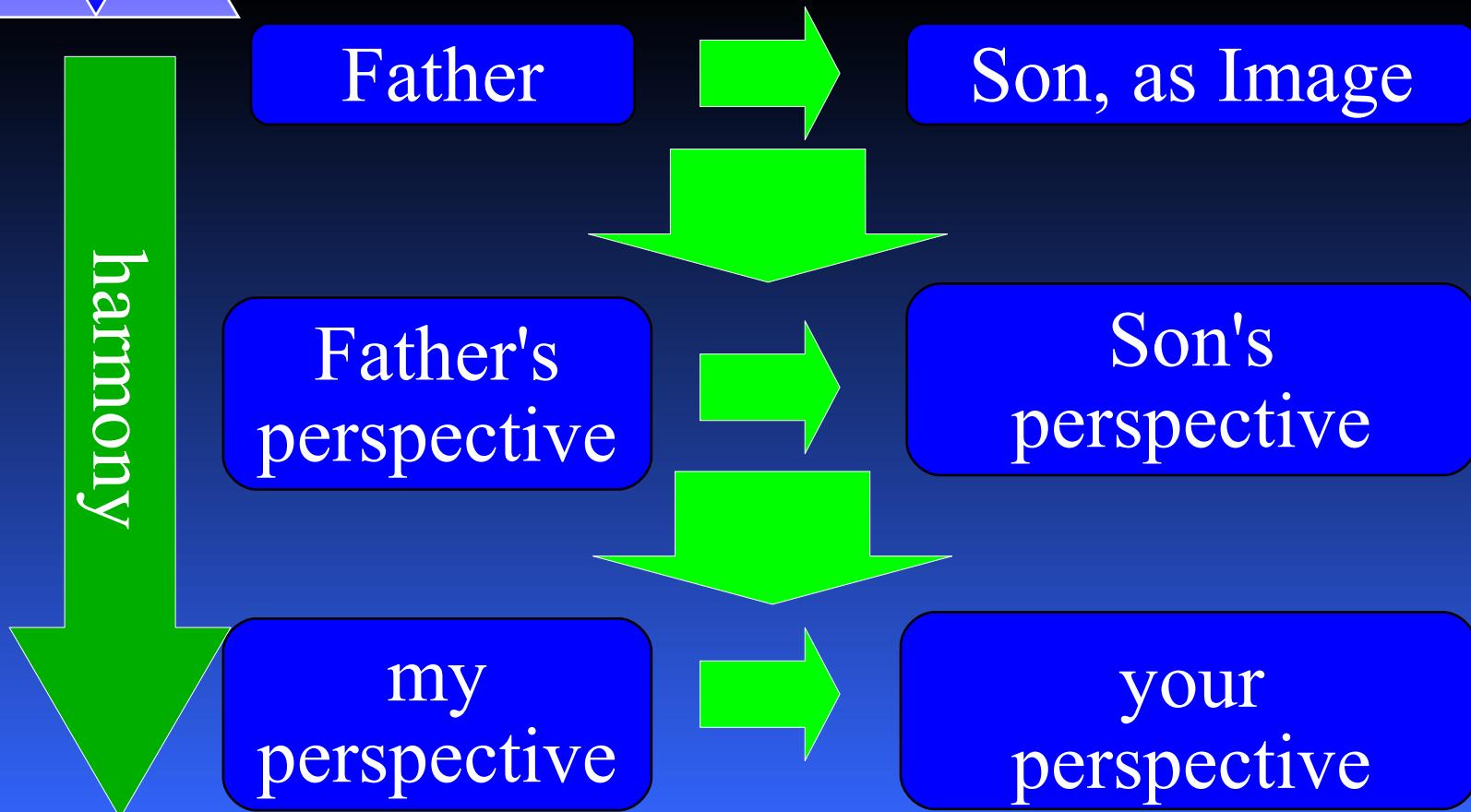


# Symmetry in the Tabernacle

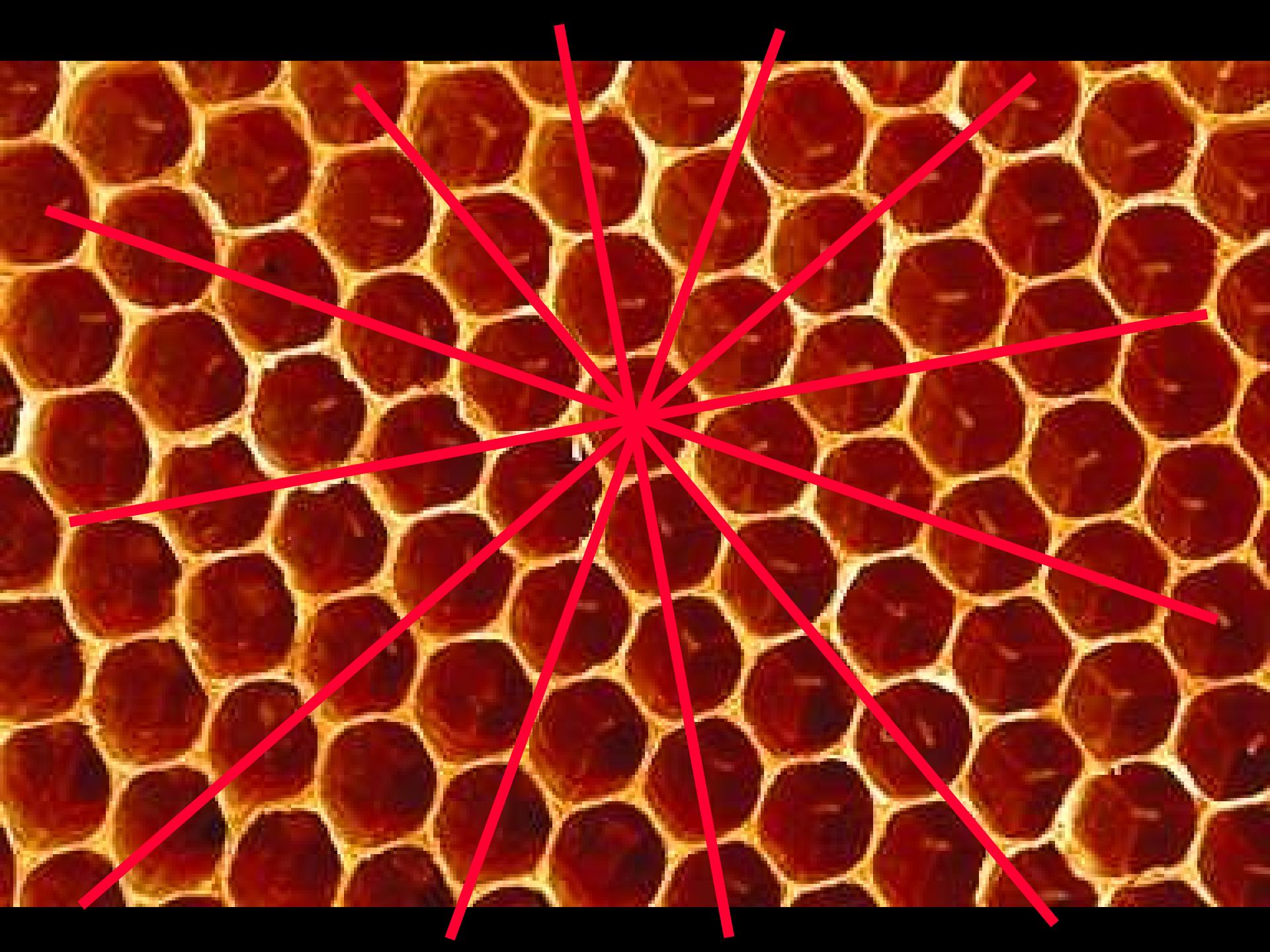




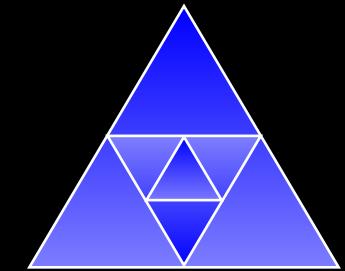
# Origin of Symmetry: Love



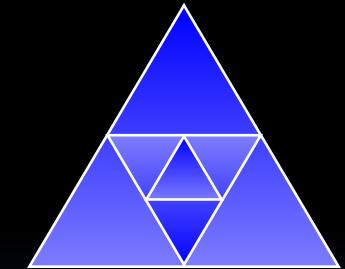




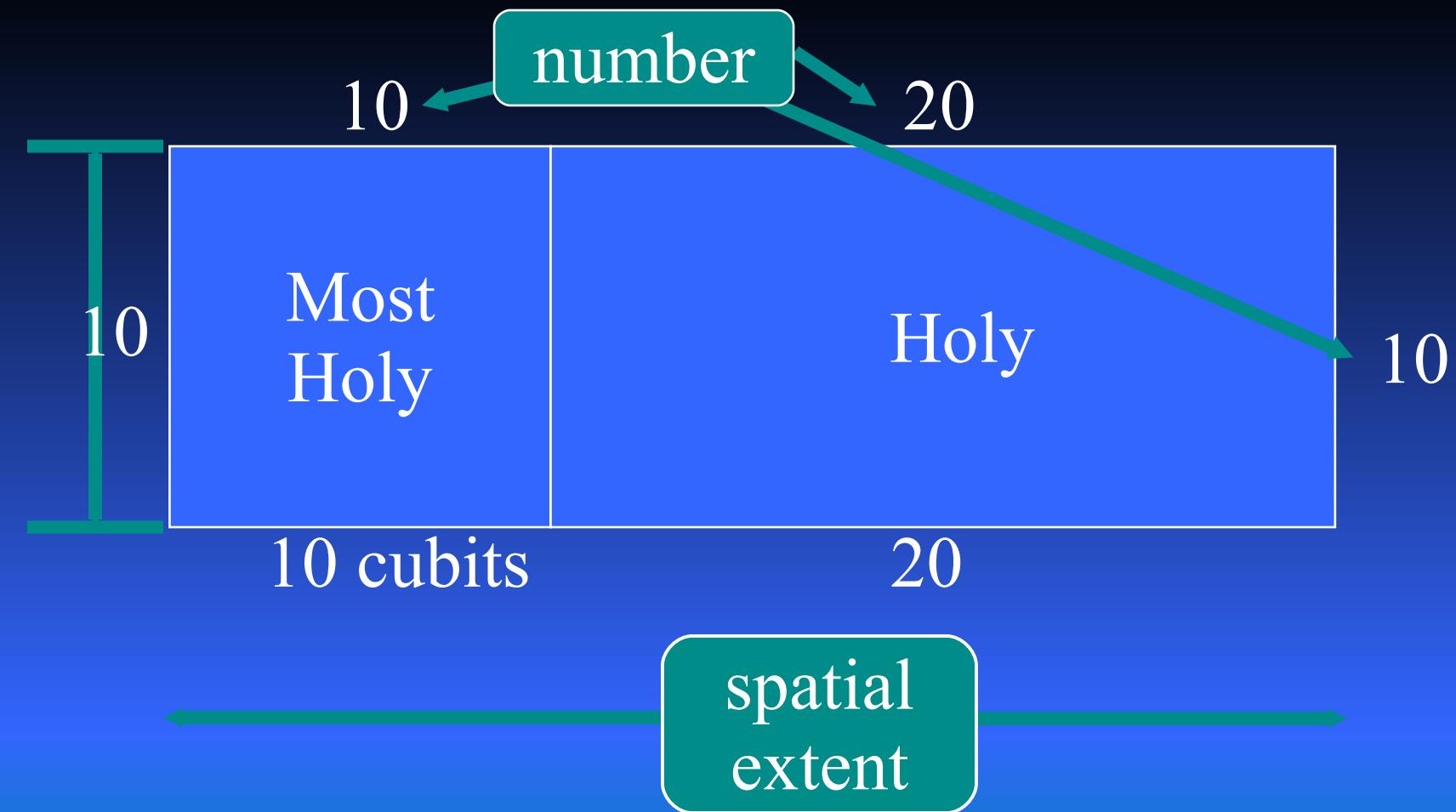


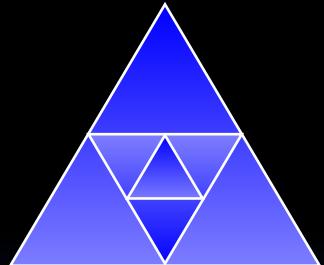


# Space and Number



# Space in the Tabernacle





# Correlation and Analogy

number



spatial  
extent

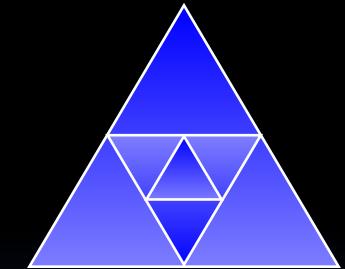
arithmetic



geometry

analytic  
geometry

God establishes coherence.  
One is "image" of the other.

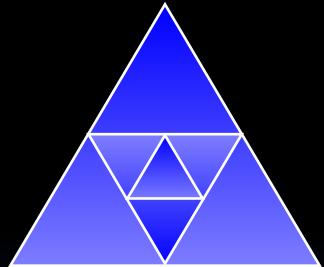


# Symmetry in Arithmetic

$$5 + 3 = 8$$



$$3 + 5 = 8$$

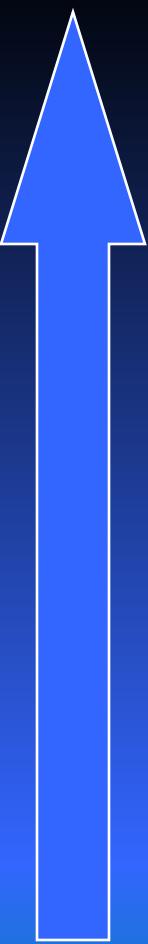


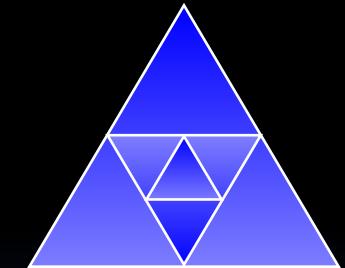
## Up and Down

$$\begin{array}{r} 549 \\ 30 \\ 156 \\ 662 \\ 987 \\ 808 \\ + 235 \\ \hline \end{array}$$



or



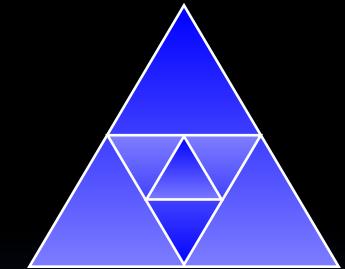


# Symmetry in Multiplication

$$5 \times 3 = 15$$



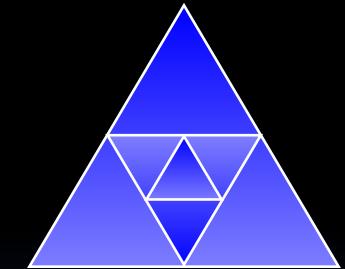
$$3 \times 5 = 15$$



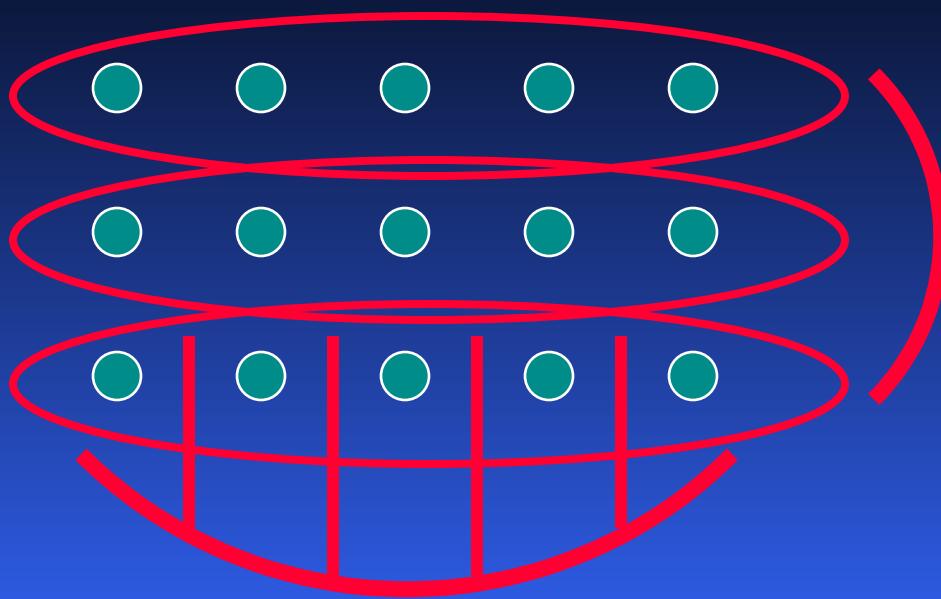
Why?

$$5 \times 3 = 3 + 3 + 3 + 3 + 3$$

$$3 \times 5 = 5 + 5 + 5$$

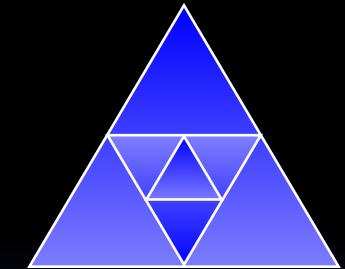


# Spatial Solution



3 groups of 5:  
 $3 \times 5$

5 groups of 3:  
 $5 \times 3$



# Proportions

$$0 \times 5 = 0$$

$$1 \times 5 = 5$$

$$2 \times 5 = 10$$

$$3 \times 5 = 15$$

$$4 \times 5 = 20$$

$$5 \times 5 = 25$$

$$6 \times 5 = 30$$

$$7 \times 5 = 35$$

$$8 \times 5 = 40$$

$$9 \times 5 = 45$$

$$0 \times 50 = 0$$

$$1 \times 50 = 50$$

$$2 \times 50 = 100$$

$$3 \times 50 = 150$$

$$4 \times 50 = 200$$

$$5 \times 50 = 250$$

$$6 \times 50 = 300$$

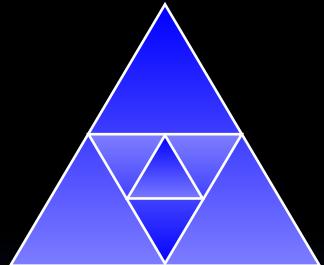
$$7 \times 50 = 350$$

$$8 \times 50 = 400$$

$$9 \times 50 = 450$$



analogy



# Held in Christ

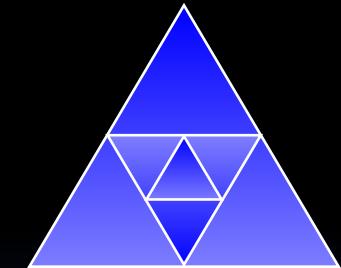
number



spatial  
extent

God establishes coherence.  
One is "image" of the other.

Coherence in Christ,  
the Word of God



# Pythagorean Theorem

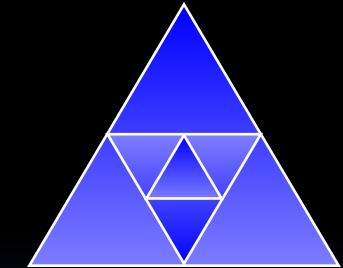
$a = 3$

$c = 5$

$b = 4$

$$3^2 + 4^2 = 5^2$$

$$a^2 + b^2 = c^2$$



# Coherence of Space and Number

space

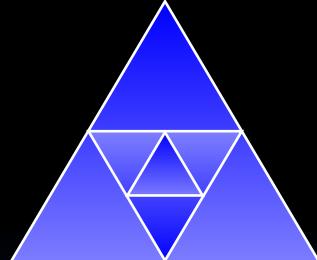
number

coherence

$$3^2 + 4^2 = 5^2$$

Harmony of God's  
mind, in Christ  
the wisdom of God





# "symmetry" of Father and Son

## Atomic Structure



nucleus

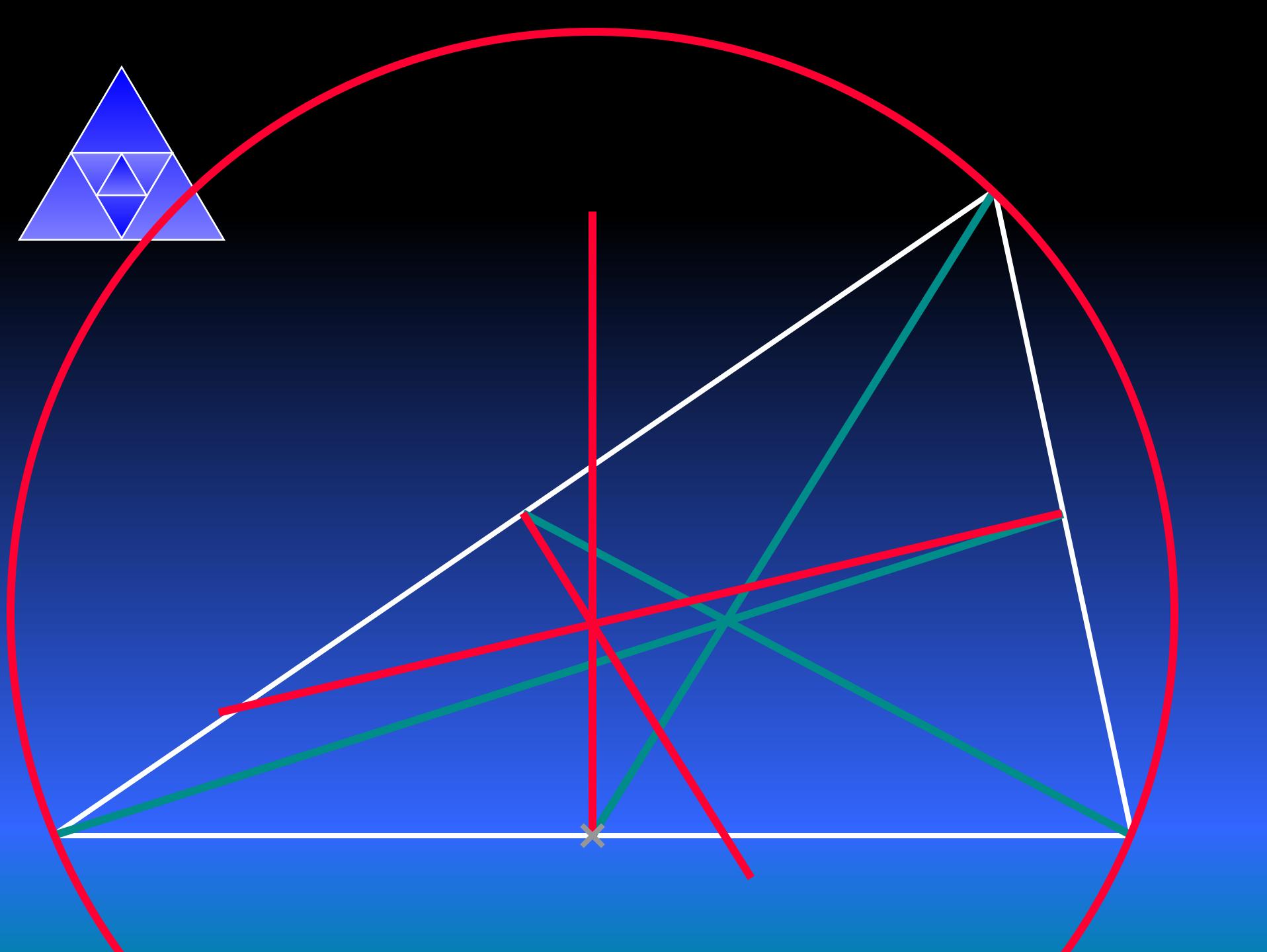
electrons

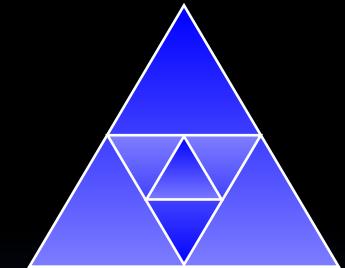
spherical  
symmetry

QM

symmetric  
theory

electron shells, differentiating  
chemical elements





# More

James Nickel, *Mathematics: Is God Silent?*  
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