

# Math Review

Shapes



+

2D shapes



# What is a 2D shape?

- It is a shape that would be classified as flat

- Examples:

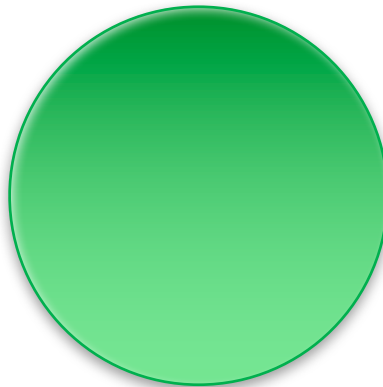




Let's Practice naming  
shapes and look at  
their properties

■ What Shape is this?

■ It is a **circle**



■ How do you know?

■ It has **no** corners

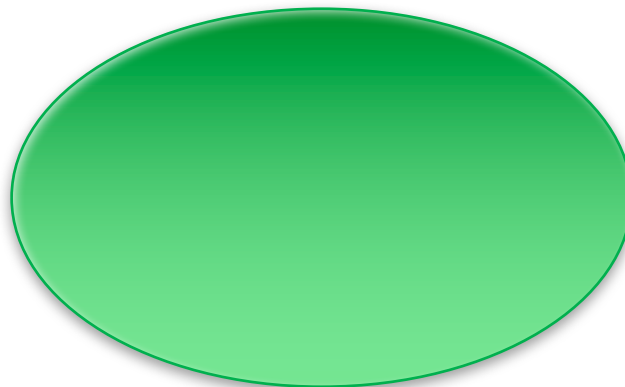
■ It has the **same** length and width



Let's Practice naming  
shapes and look at  
their properties

■ What Shape is this?

■ It is an oval



■ How do you know?

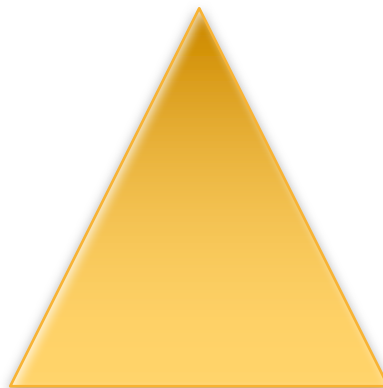
■ It has no corners

■ It has a different length and width



Let's Practice naming  
shapes and look at  
their properties

- What Shape is this?
  - It is an **triangle**



- How do you know?
  - It has 3 corners
  - It has 3 sides
  - It has 3 angles



How can we  
remember that  
triangle means 3?

- Let's consider some other words that contain "tri"

- Tricycle



- What does a tricycle have 3 of?
- 3 wheels



- Triceratops
- What does a triceratops have 3 of?
- 3 Horns



Let's try some trivia



■ Q: a race that combines three activities- swimming, bicycling, & running

■ A: Triathlon

■ Q: being able to speak 3 languages

■ A: trilingual

■ three related plays or novels.

■ A: trilogy

■ Examples: Lord of the Rings, The Hunger Games, The Divergent series.

■ Q: a three-legged stool, table, or stand used to hold things, such as a camera

■ A: Tripod.







Let's Practice naming  
shapes and look at  
their properties

- What Shape is this?
  - It is a **rectangle**



- How do you know?
  - It has **4** corners
  - It has **4** angles
  - It has **4** sides
  - The length and width are **different**



Let's Practice naming  
shapes and look at  
their properties

■ What Shape is this?

■ It is a square



■ How do you know?

■ It has 4 corners

■ It has 4 angles

■ It has 4 sides

■ The length and width are the same



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **trapezoid**



- How do you know?
  - It has **4** corners
  - It has **4** angles
  - It has **4** sides
  - The top is **shorter** than the bottom
  - The sides are at **angles greater or less than 90 degrees** to one another



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **parallelogram**



- How do you know?
  - It has **4** corners
  - It has **4** angles
  - It has **4** sides
  - The sides are at **angles greater or less than 90 degrees** to one another



## Let's consider the last four shapes

- Rectangle
- Square
- Trapezoid
- Parallelogram

- All 4 of these shapes had **4 sides and 4 angles**
- These shapes are therefore classified as **quadrilaterals**
- A quadrilateral means that it is a shape with 4 sides



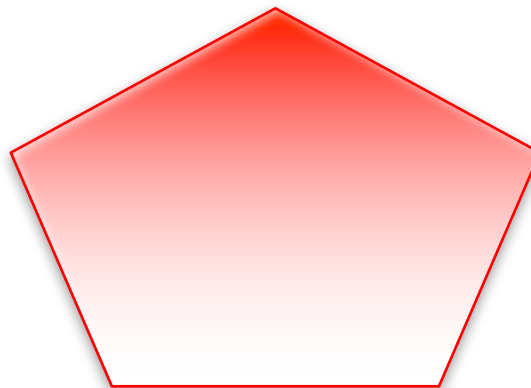
Let's try to define the following words and see if we know their meanings

- **Quadrant**:
  - Definition:  $\frac{1}{4}$  the circumference of a circle
  
- **Quadruple**:
  - Definition: means to multiply by 4
  
- Therefore the word quad in math means 4



Let's Practice naming  
shapes and look at  
their properties

- What Shape is this?
  - It is a **pentagon**



- How do you know?
  - It has **5** corners
  - It has **5** angles
  - It has **5** sides
- Examples
  - The Pentagon
  - Black areas on a soccer ball



Let's try to define the following words and see if we know their meanings

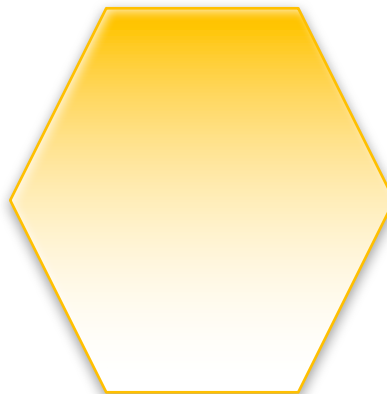
- **Pentacle:**
  - Definition: 5 pointed star
  
- **Pentane:**
  - Definition: a molecule that contains 5 carbons
  
- **Pentathlon:**
  - Definition: A sporting event that involves 5 track and field events
  
- Therefore in math Penta means 5





Let's Practice naming  
shapes and look at  
their properties

- What Shape is this?
  - It is a **hexagon**



- How do you know?
  - It has **6** corners
  - It has **6** angles
  - It has **6** sides
- Examples
  - Honey cones
  - White areas on a soccer ball



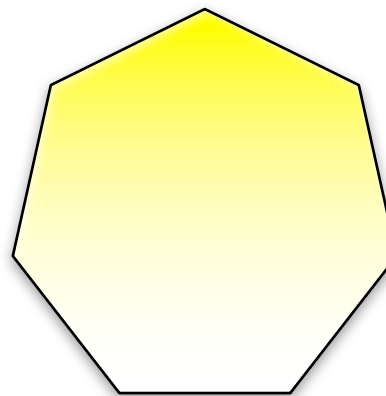
Let's try to define the following words and see if we know their meanings

- **hexameter:**
  - Definition: a line of verse consisting of 6 metrical feet
- **hexane:**
  - Definition: A molecule containing 6 carbons
- **hexapod:**
  - Definition: an insect with six feet/legs
- Therefore in math hexa means **6**



Let's Practice naming  
shapes and look at  
their properties

- What Shape is this?
  - It is a **heptagon**



- How do you know?
  - It has **7** corners
  - It has **7** angles
  - It has **7** sides
- Examples
  - Some coins (50 pence)
  - Pineapple (when cut)
  - Gemstone cut



Let's try to define the following words and see if we know their meanings

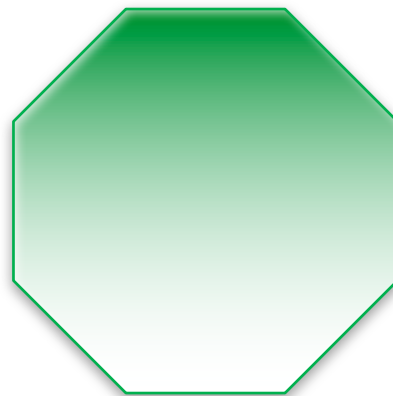
- **heptameter:**
  - Definition: a line of verse consisting of 7 metrical feet
  
- **heptane:**
  - Definition: A molecule containing 7 carbons
  
- **heptaploid:**
  - Definition: having seven times the monoploid number of chromosomes
  
- Therefore in math hepta means **7**



Let's Practice naming  
shapes and look at  
their properties

■ What Shape is this?

■ It is a **octagon**



■ How do you know?

■ It has **8** corners

■ It has **8** angles

■ It has **8** sides

■ Examples

■ Most stop signs



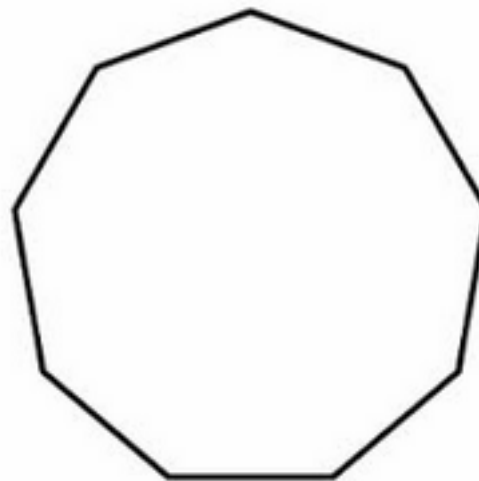
Let's try to define the following words and see if we know their meanings

- **octopus**:
  - Definition: 8 legged marine animal
- **octopod**:
  - Definition: 8 legged marine animal
- Therefore in math octa/o means **8**



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **nonagon**



- How do you know?
  - It has **9** corners
  - It has **9** angles
  - It has **9** sides
- Examples
  - Some coins
  - Some Hot tubs

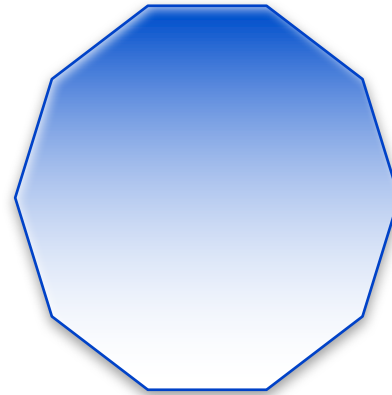


## Let's Practice naming shapes and look at their properties

How long is a decade?

10 Years

- What Shape is this?
  - It is a **decagon**



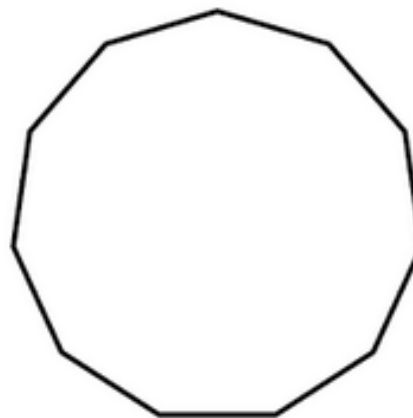
- How do you know?
  - It has **10** corners
  - It has **10** angles
  - It has **10** sides
- Examples
  - Liberia 10 dollar coin
  - Some clocks





Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **hendecagon**

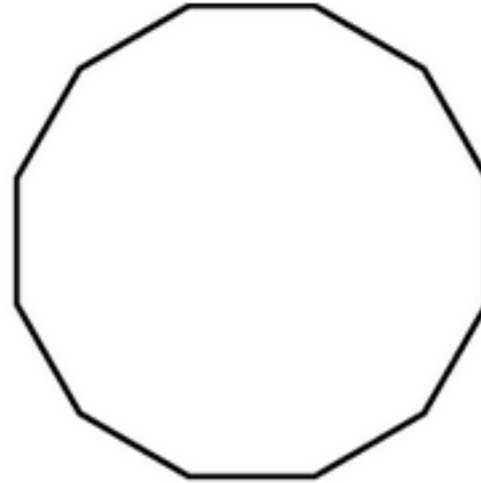


- How do you know?
  - It has **11** corners
  - It has **11** angles
  - It has **11** sides
- How do we know it is 11
  - Hen = 1
  - Deca = 10
  - So  $10 + 1 = 11$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **dodecagon**



- How do you know?
  - It has **12** corners
  - It has **12** angles
  - It has **12** sides
- How do we know it is 12
  - Do = 2
  - Deca = 10
  - So  $10 + 2 = 12$

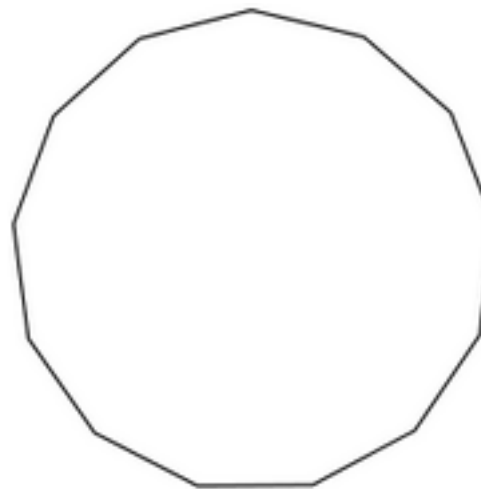


## Let's Practice naming shapes and look at their properties

What is triskaidekaphobia?

It is the fear of the number 13

- What Shape is this?
  - It is a **triskaidecagon**

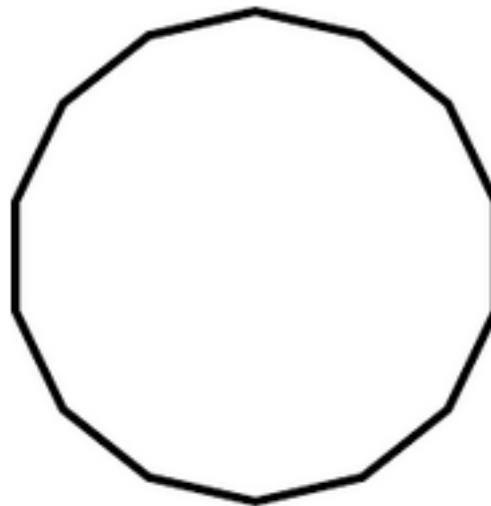


- How do you know?
  - It has **13** corners
  - It has **13** angles
  - It has **13** sides
- How do we know it is 13
  - Triskai = 3
  - Deca = 10
  - So  $10 + 3 = 13$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **tetrakaidecagon**

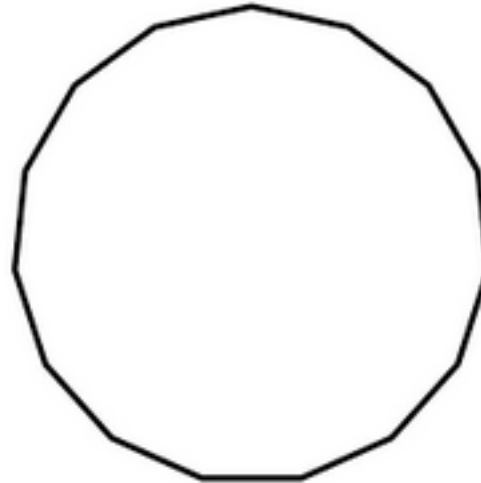


- How do you know?
  - It has **14** corners
  - It has **14** angles
  - It has **14** sides
- How do we know it is 14
  - Tetrakai = 4
  - Deca = 10
  - So  $10 + 4 = 14$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **pentadecagon**

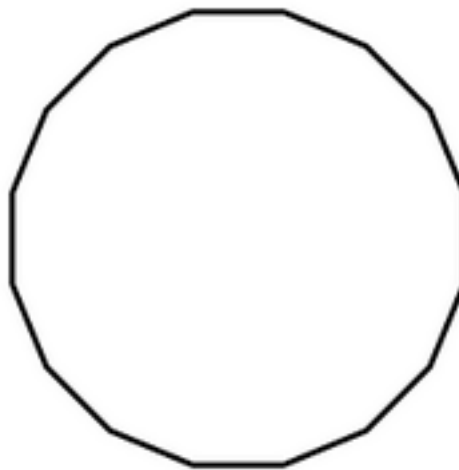


- How do you know?
  - It has **15** corners
  - It has **15** angles
  - It has **15** sides
- How do we know it is 15
  - Penta = 5
  - Deca = 10
  - So  $10 + 5 = 15$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **hexadecagon**

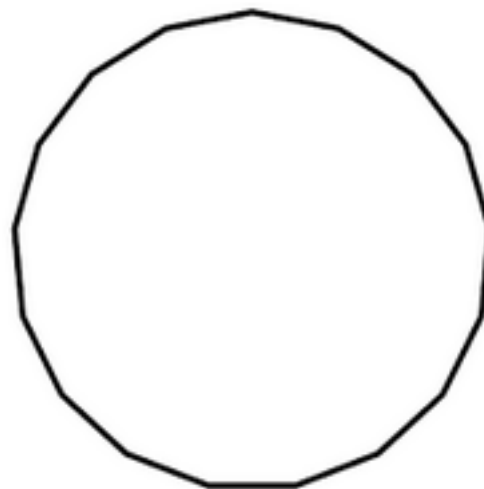


- How do you know?
  - It has **16** corners
  - It has **16** angles
  - It has **16** sides
- How do we know it is 16
  - Hexa = 6
  - Deca = 10
  - So  $10 + 6 = 16$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **heptadecagon**

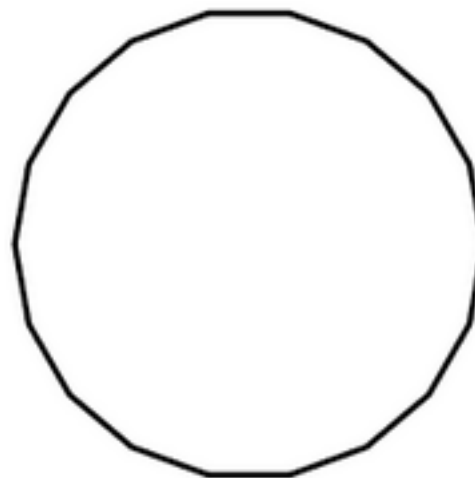


- How do you know?
  - It has **17** corners
  - It has **17** angles
  - It has **17** sides
- How do we know it is 17
  - Hepta = 7
  - Deca = 10
  - So  $10 + 7 = 17$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **octadecagon**



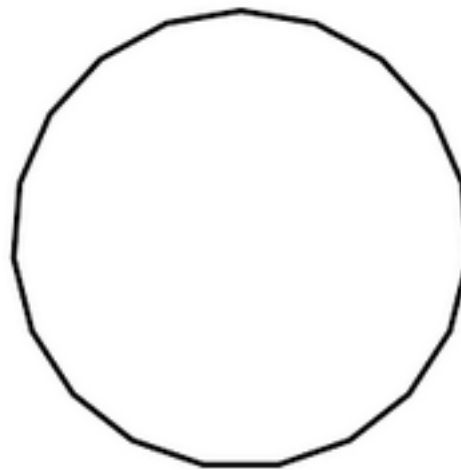
- How do you know?
  - It has **18** corners
  - It has **18** angles
  - It has **18** sides
- How do we know it is 18
  - Octa = 8
  - Deca = 10
  - So  $10 + 8 = 18$





Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **Enneadecagon**

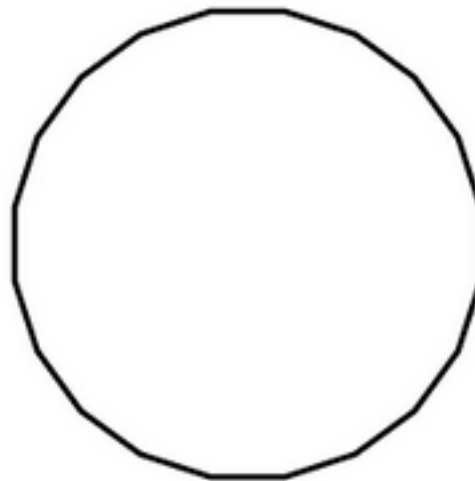


- How do you know?
  - It has **19** corners
  - It has **19** angles
  - It has **19** sides
- How do we know it is 19
  - Ennea = 9
  - Deca = 10
  - So  $10 + 9 = 19$



Let's Practice naming shapes and look at their properties

- What Shape is this?
  - It is a **Icosagon**



- How do you know?
  - It has **20** corners
  - It has **20** angles
  - It has **20** sides



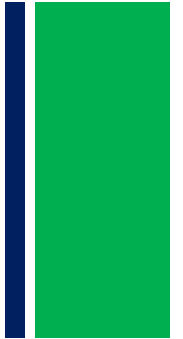
# Scavenger hunt

Get into groups of 3

- In the classroom see how many shapes you can find.
- List the shapes that you found and how you know they are that shape.
- The group with the most will receive a prize.



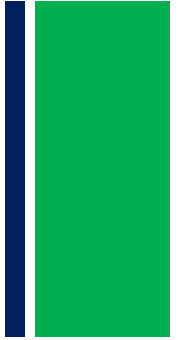
# Prefixes and Their meanings



Prefixes	Number
Tri	3
Quad	4
Penta	5
Hexa	6
Hepta	7
Octa	8
Nona	9
Deca	10
Hendeca	11

Prefixes	Number
Dodeca	12
Triskaideca	13
Tetrakaideca	14
Pentadeca	15
Hexadeca	16
Heptadeca	17
Octadeca	18
Enneadeca	19
Icosa	20

# + Class Work



- Complete the worksheet(s) provided by the end of the block
- There will be a quiz on shapes at the beginning of next class please be on time.



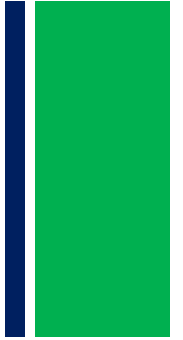
# References:



1. <https://quizlet.com/4230929/flashcards> (tri quizlet)
2. <http://www.thefreedictionary.com/quadruplicating> (definition of quadruplicating)
3. <http://www.thefreedictionary.com/quadrant> (definition of quadrant)
4. <https://www.google.ca/search?q=hexagons+in+real+life&safe=strict&client=firefox-b-ab&dcr=0&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwip7PDquO7YAhVF22MKHZtVBIYQsAQIKQ&biw=1440&bih=679> (hexagon examples)
5. [https://www.google.ca/search?q=heptagon+examples+in+real+life&safe=strict&client=firefox-b-ab&dcr=0&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjB9Y\\_8ue7YAhVBMGMKHTKEAzAQsAQIJg&biw=1440&bih=679#imgrc=1zvYcenY1RIygM:](https://www.google.ca/search?q=heptagon+examples+in+real+life&safe=strict&client=firefox-b-ab&dcr=0&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjB9Y_8ue7YAhVBMGMKHTKEAzAQsAQIJg&biw=1440&bih=679#imgrc=1zvYcenY1RIygM:) (heptagon examples)
6. <https://study.com/academy/lesson/nonagon-definition-shape.html> (nonagon)
7. <https://www.google.ca/search?q=decagon+examples+real+life&safe=strict&client=firefox-b-ab&dcr=0&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjnnfqSve7YAhVCwWWMKHTgwBpwQsAQIJg&biw=1440&bih=679> (decagon examples)
8. <https://quizlet.com/21280956/polygons-1-20-sides-flash-cards/> (polygons – 1-20 sides)



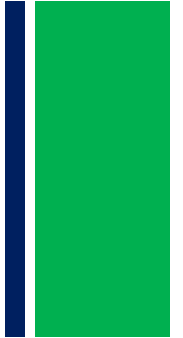
# References:



9. <http://math.wikia.com/wiki/Hendecagon> (Hendecagon)
10. <https://study.com/academy/lesson/dodecagon-sides-area-angles.html> (dodecagon)
11. <https://en.wiktionary.org/wiki/triskaidecagon> (triskaidecagon)
12. [http://etc.usf.edu/clipart/37300/37390/14-gon\\_37390.htm](http://etc.usf.edu/clipart/37300/37390/14-gon_37390.htm) (tetrakaidecagon)
13. <http://www.kidsmathgamesonline.com/pictures/shapes/pentadecagon.html>  
(pentadecagon)
14. [https://commons.wikimedia.org/wiki/File:Regular\\_hexadecagon.svg](https://commons.wikimedia.org/wiki/File:Regular_hexadecagon.svg) (hexadecagon)
15. [https://commons.wikimedia.org/wiki/File:Regular\\_heptadecagon.svg](https://commons.wikimedia.org/wiki/File:Regular_heptadecagon.svg) (heptadecagon)
16. <http://math.wikia.com/wiki/Octadecagon> (octadecagon)
17. [https://commons.wikimedia.org/wiki/File:Regular\\_enneadecagon.svg](https://commons.wikimedia.org/wiki/File:Regular_enneadecagon.svg) (enneadecagon)
18. <http://www.kidsmathgamesonline.com/pictures/shapes/icosagon.html> (icosagon)



# References:



19. <http://www.thefreedictionary.com/pentacle> (pentacle)
20. <http://www.thefreedictionary.com/pentane> (pentane)
21. <http://www.thefreedictionary.com/pentathlon> (pentathlon)
22. <https://www.merriam-webster.com/dictionary/hexapod> (hexapod)
23. <https://www.merriam-webster.com/dictionary/hexane> (hexane)
24. <https://www.merriam-webster.com/dictionary/hexameter>  
(hexameter)
25. <https://www.merriam-webster.com/dictionary/heptaploid>  
(hemptaploid)