



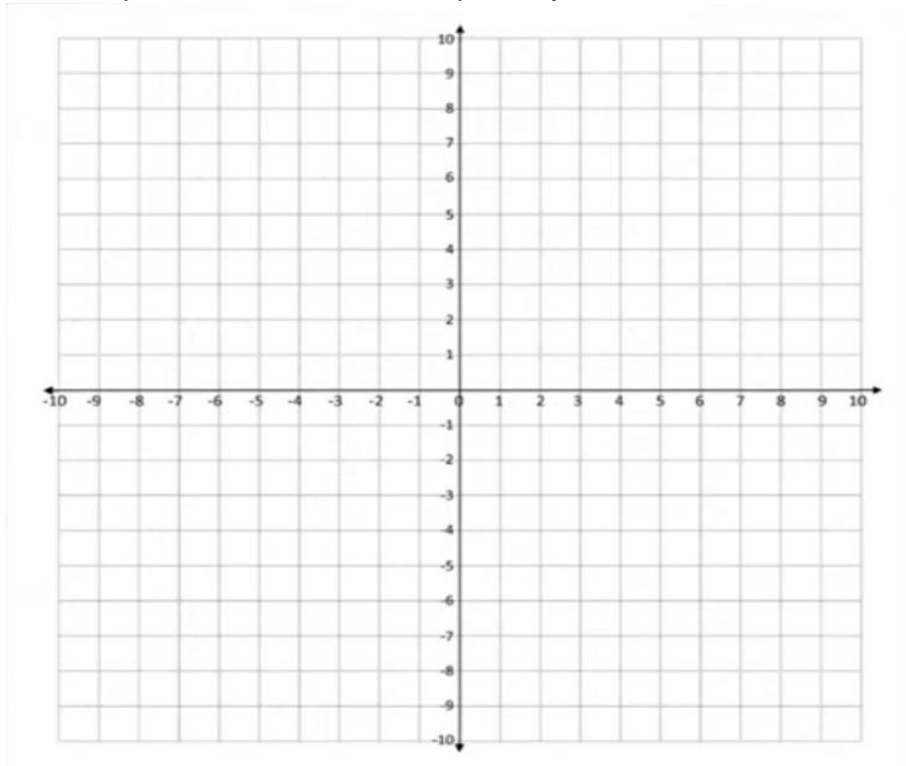
CODE: _____ NAME: _____ GRADE: 5th _____ DATE: _____

MATH TEST THIRD TERM WORKSHOP

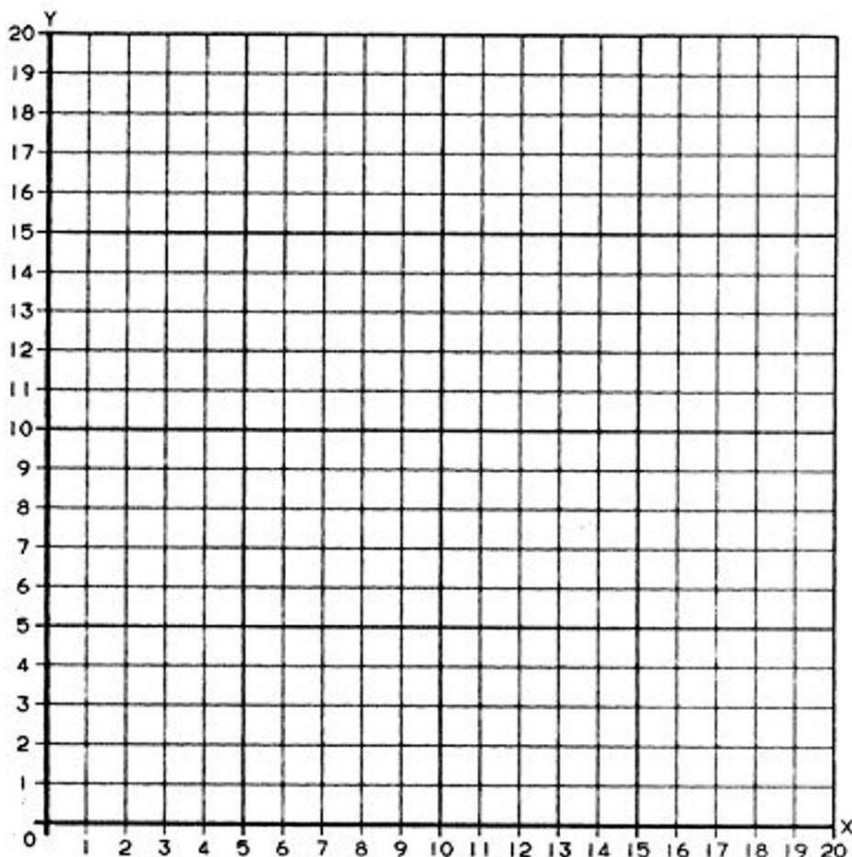
| DEF. | ACHIEVEMENTS | QUESTIONS |
|------|--|-----------|
| | Understands the concepts of powers and roots, identifying the base, exponent, expanded form, radicand, index, and radical symbol, and can solve problems involving repeated multiplication and square roots. | |
| | Uses and justifies properties and numerical relationships to generate and verify equivalences between numerical expressions. | |
| | Solves real-world problems involving powers and roots by applying various procedures to simplify multiplicative situations and calculate the areas of squares and the volumes of cubes. | |

Plot the following ordered pairs on the coordinate plane, join them and name the figure formed.

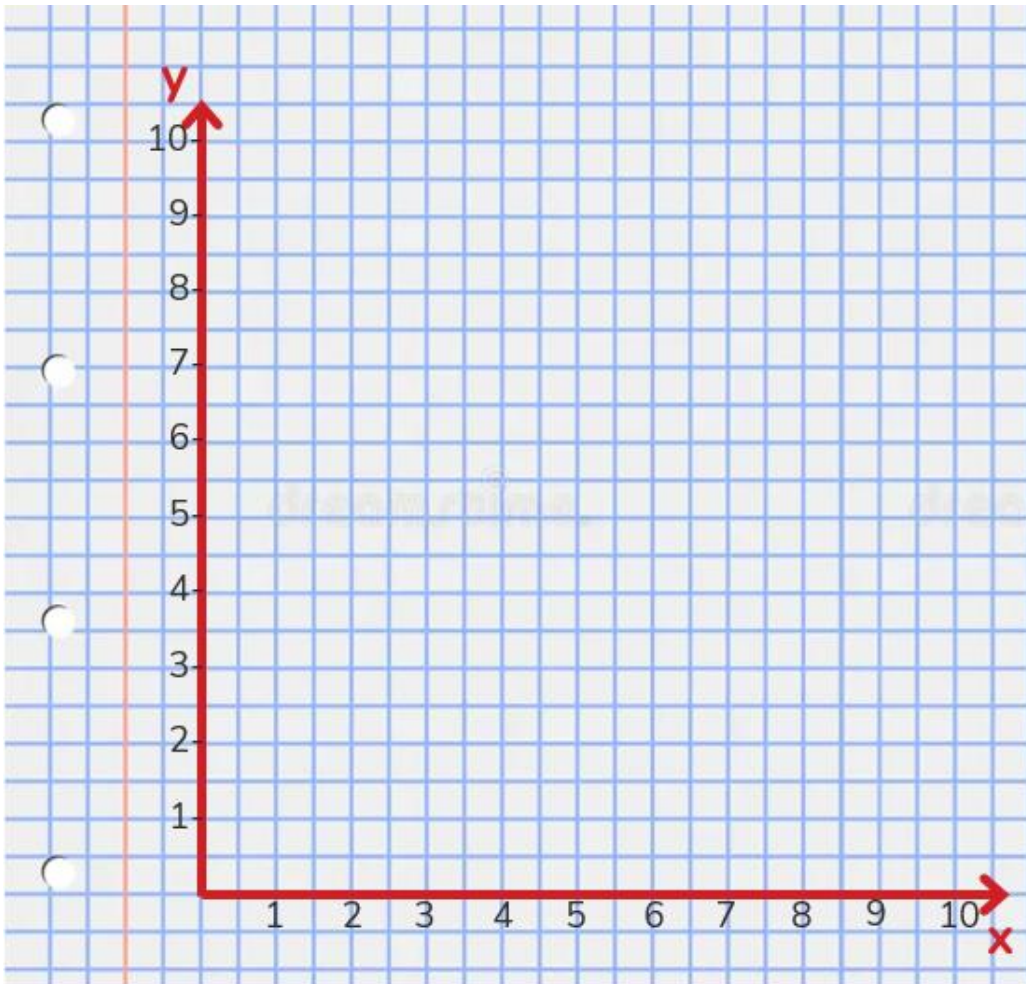
- A (3,-4)
- B (0,0)
- C (0,9)
- D (-5,0)
- E (-8,0)
- F (-7,-2)
- G (0,-10)
- H (9,2)
- I (4,3)



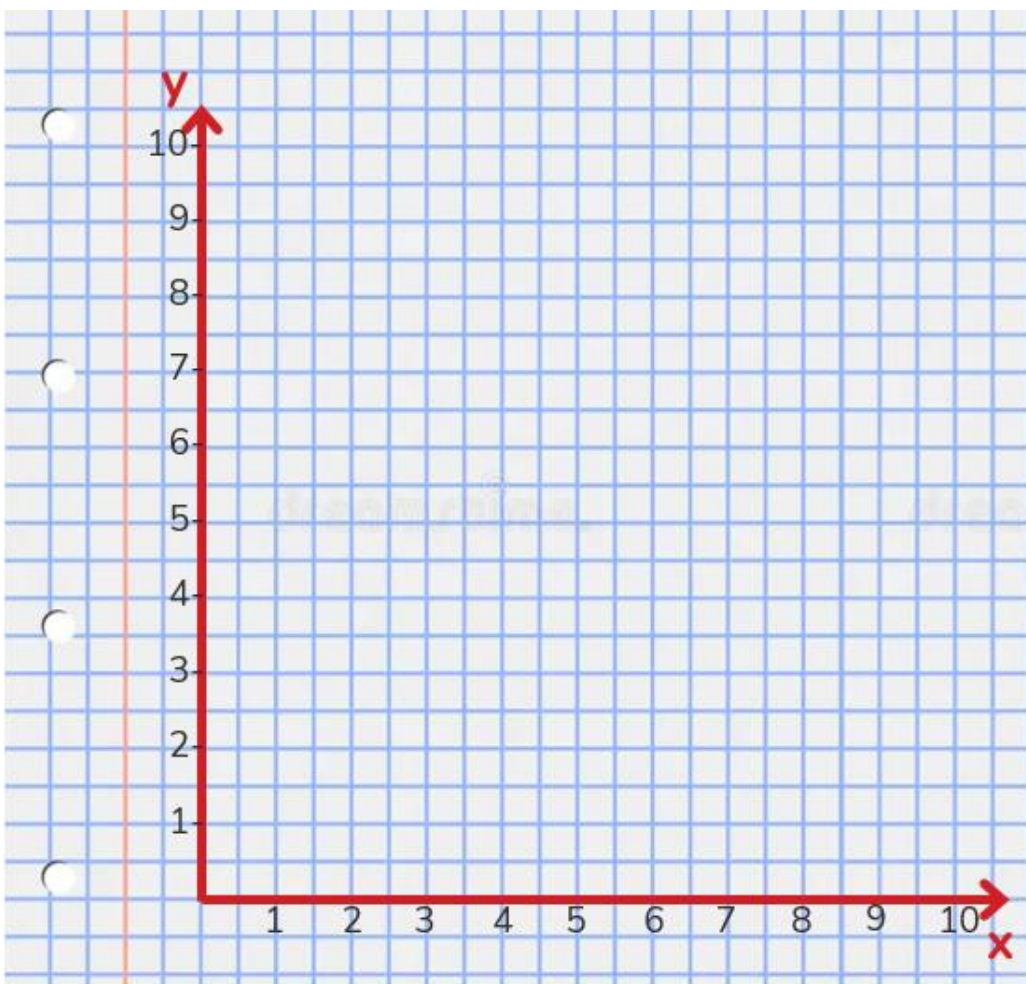
- Locate the ordered pairs: **P=(3,12); Q=(3,19); R=(5,19); S=(5,14); T=(7,14); U=(7,12).**
- Join the points and color the polygon.
- Move the figure 8 units to the right and 2 units to the down
- What are the new ordered pairs of the transformed figure?
- **P'=(__,__); Q'=(__,__); R'=(__,__); S'=(__,__); T'=(__,__); U'=(__,__);**



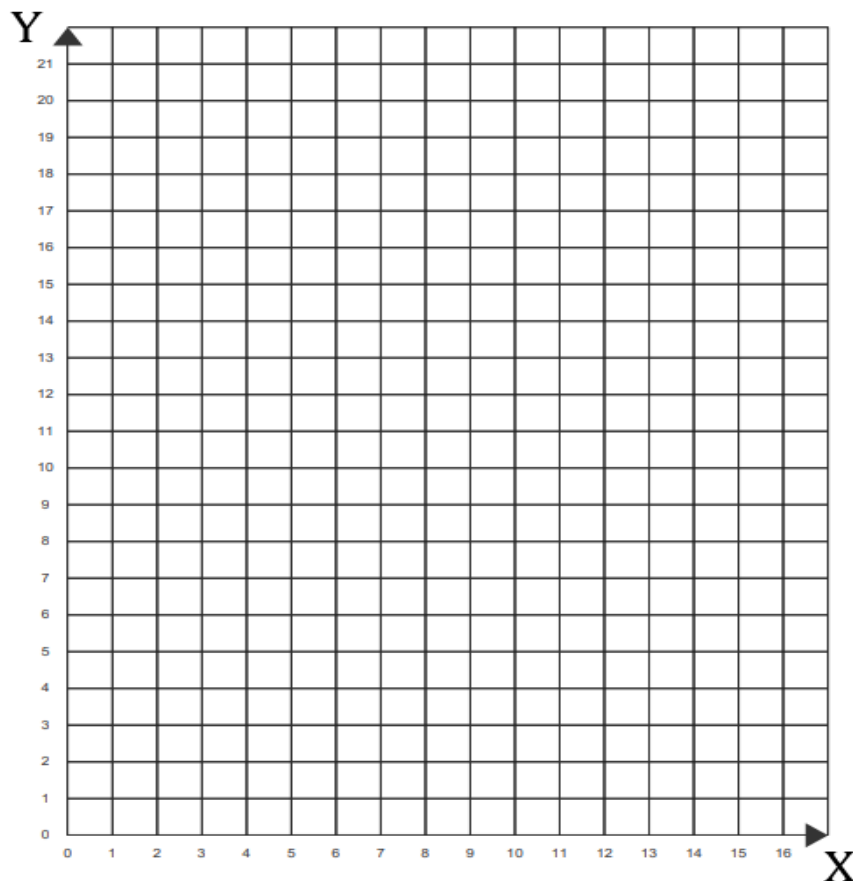
PLOT THE POINTS: **A=(5,6); B=(5,9); C=(7,9)**
 JOIN THE POINTS AND COLOR THE RESULTING FIGURE
 ROTATE THE ORIGINAL FIGURE 90° COUNTERCLOCKWISE ABOUT POINT "A".
 JOIN THE POINTS, RENAME THE OTHER POINTS AND COLOR THE RESULTING FIGURE.



PLOT THE POINTS: **A=(1,1); B=(4,1); C=(4,2); D=(2,2); E=(2,4); F=(3,4); G=(3,5); H=(2,5); I=(2,7); J=(4,7); K=(4,8); L=(1,8)**
 TRACE THE LINE OF SYMMETRY AT **X=5**
 FLIP THE SHAPE OVER THE MIRROR LINE.
 JOIN THE NEW POINTS AND COLOR THE SHAPES WITH DIFFERENT COLORS

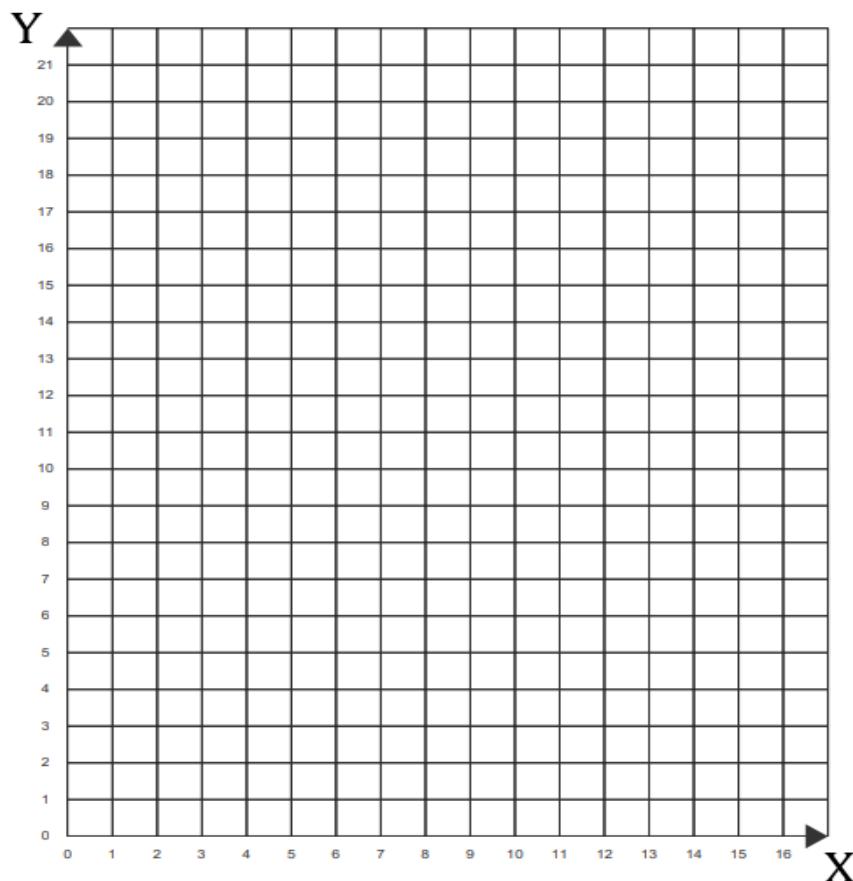


Graph a trapezium in the Cartesian plane with parallel sides of **8 and 4 units**, **6 units height**, and reduce it by a scale factor of **$1/2$** . Write below the ordered pairs.

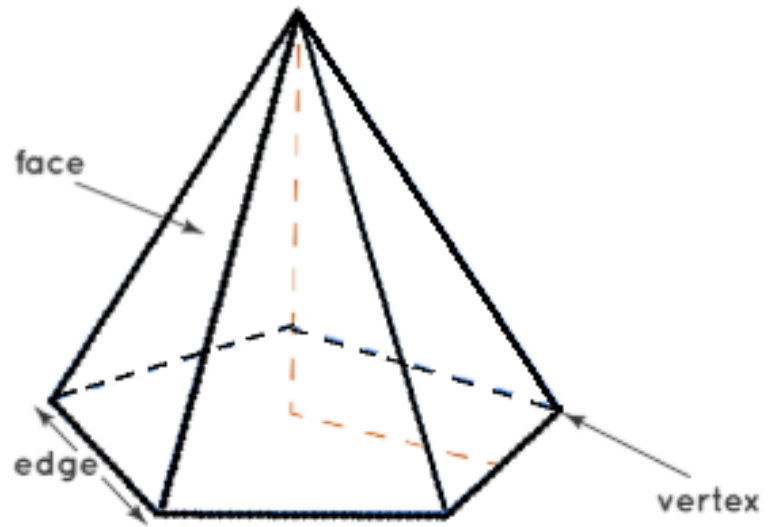








Graph a right triangle in the Cartesian plane of **5 units base** and **6 units height** and enlarge it by a scale factor of **2**.

Write below the new ordered pairs.

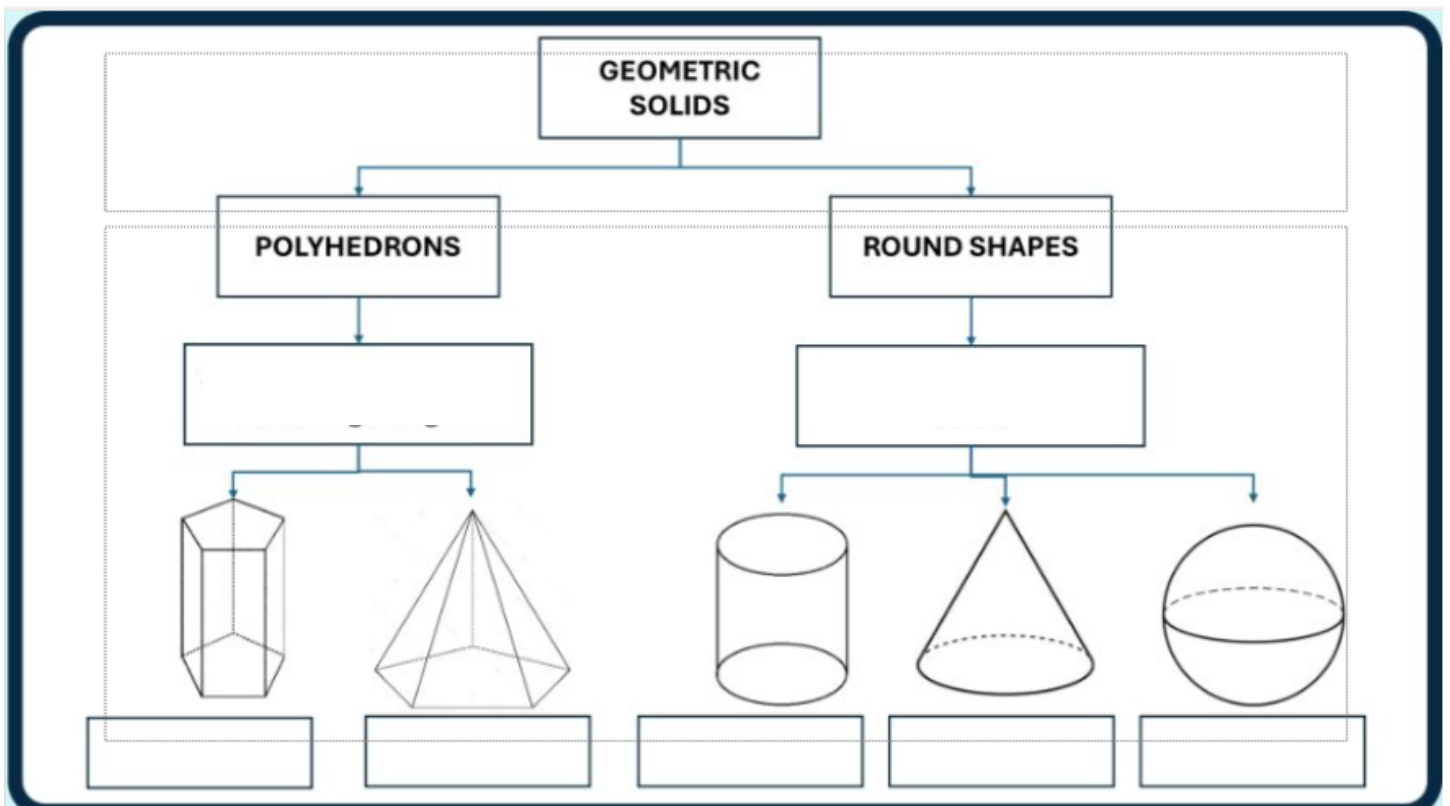


According to the following pictures, tell the number of faces, edges and vertices they have:

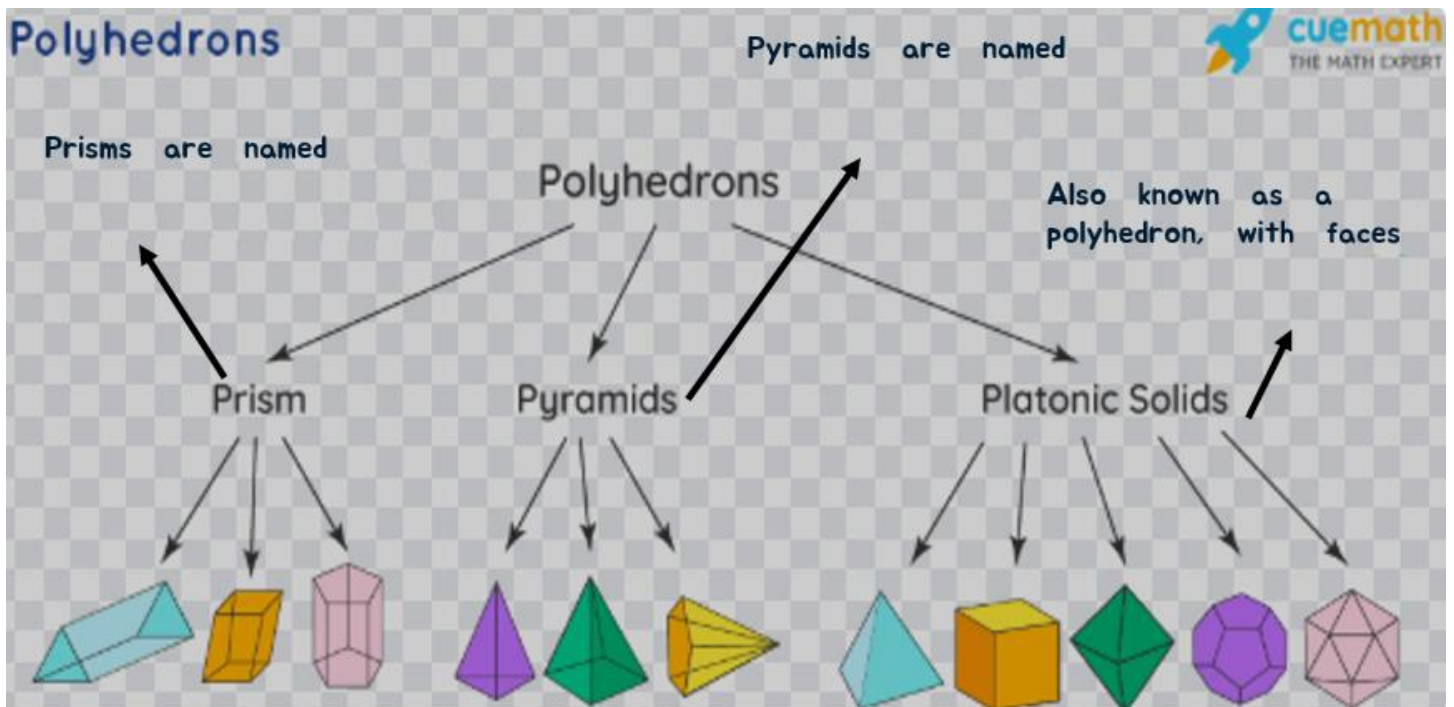


| | | |
|---|--|--|
| <p>a.</p>  <p>Faces <input type="checkbox"/></p> <p>Edges <input type="checkbox"/></p> <p>Vertices <input type="checkbox"/></p> <p>Name: _____</p> | <p>b.</p>  <p>Faces <input type="checkbox"/></p> <p>Edges <input type="checkbox"/></p> <p>Vertices <input type="checkbox"/></p> <p>Name: _____</p> | <p>c.</p>  <p>Faces <input type="checkbox"/></p> <p>Edges <input type="checkbox"/></p> <p>Vertices <input type="checkbox"/></p> <p>Name: _____</p> |
| <p>d.</p>  <p>Faces <input type="checkbox"/></p> <p>Edges <input type="checkbox"/></p> <p>Vertices <input type="checkbox"/></p> <p>Name: _____</p> | <p>e.</p>  <p>Faces <input type="checkbox"/></p> <p>Edges <input type="checkbox"/></p> <p>Vertices <input type="checkbox"/></p> <p>Name: _____</p> | <p>f.</p>  <p>Faces <input type="checkbox"/></p> <p>Edges <input type="checkbox"/></p> <p>Vertices <input type="checkbox"/></p> <p>Name: _____</p> |

According to the picture shown below, complete the information:

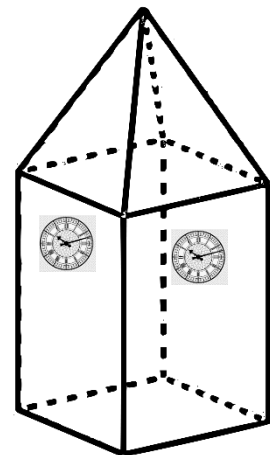


According to the picture shown below, complete the information:

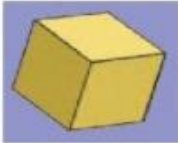
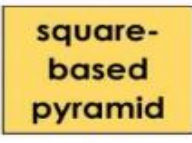
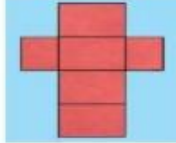

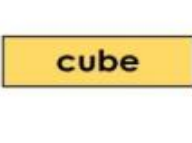
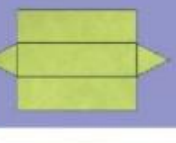
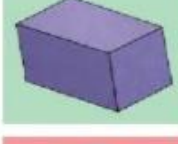

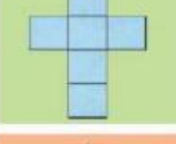


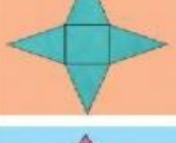


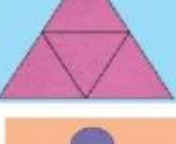
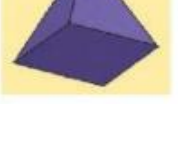




complete the information.

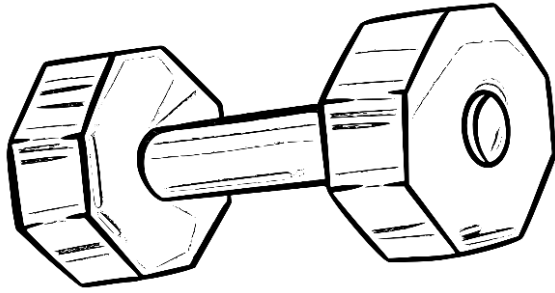
Amelie visited the iconic Big Ben London Tower. She made a simple drawing and described the tower and said: The tower is made of ...



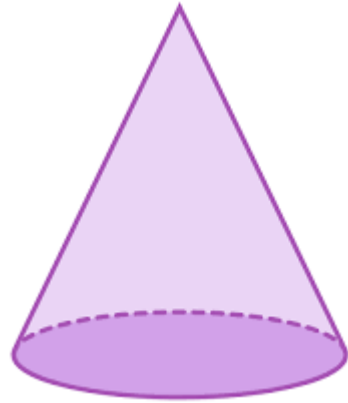
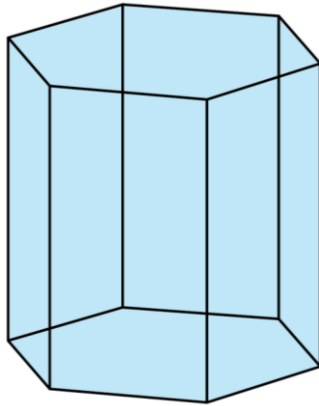
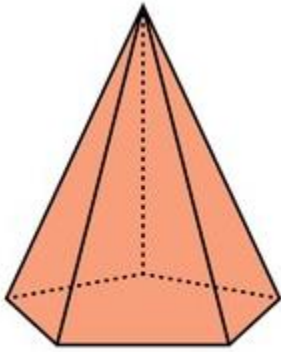
Match each solid shape to its name and net. Use a different color for each one.

| | | | | |
|---|---|---|---|--|
|  | • |  | • |  |
|  | • |  | • |  |
|  | • |  | • |  |
|  | • |  | • |  |
|  | • |  | • |  |
|  | • |  | • |  |

Martín is training at the gym; he takes the dumbbells and notices that it is a composite solid made of ...



Considering the solids, complete the information to make the sentence true:

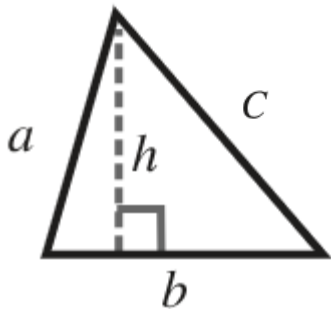


About the cone, it's not a polyhedron because ...

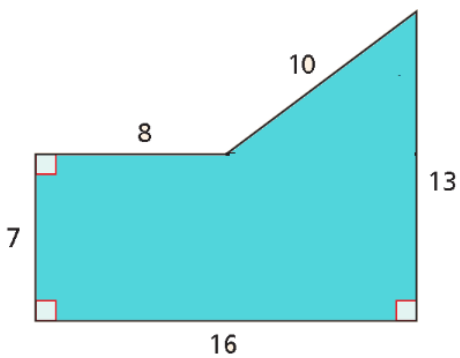
About the prism, the number of edges are ...

About the polyhedrons, the number of vertices are ...

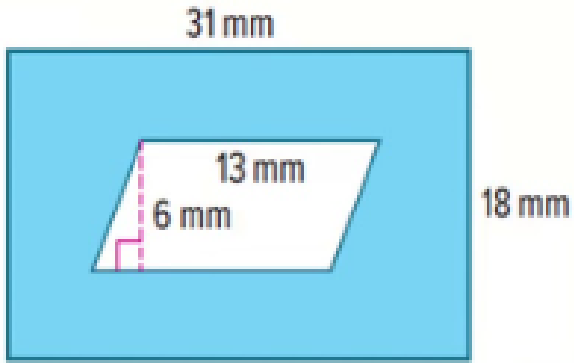
Considering the figure, find its area when $a = 15$ cm; $b = 37$ cm; $c = 42$ cm and $h = 12$ cm



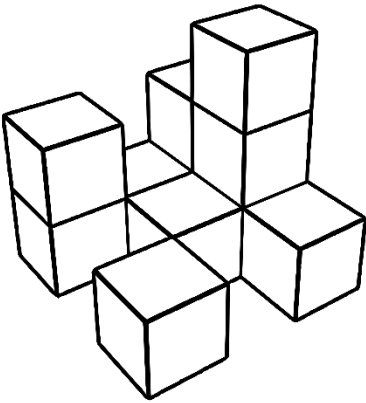
Considering the figure, find its area.



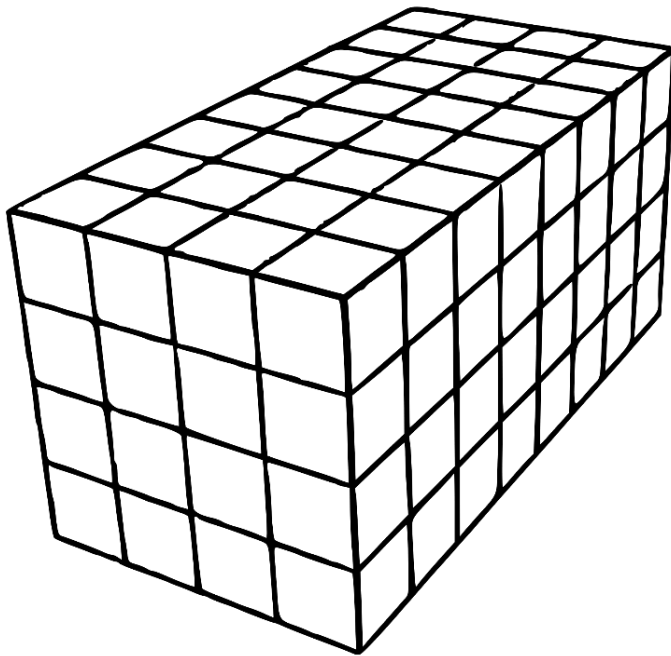
Considering the figure, find the shaded area.



Sebastian broke his cube, how many cubes are needed to repair it and get the full cube?

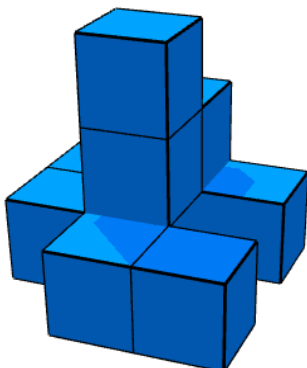


Marco wants to paint the flag of Colombia using the figure shown below in a horizontal way. Color the cubes and complete the chart.



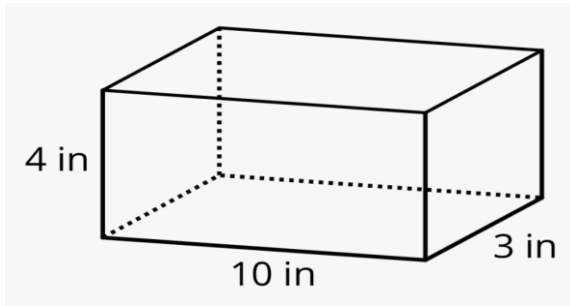
| Color | Fraction | Volume |
|--------|---------------|--------|
| Yellow | $\frac{1}{2}$ | |
| Blue | $\frac{1}{4}$ | |
| Red | $\frac{1}{4}$ | |

How many cubes are missing to complete the cube?



The solid is 3 units edge

What is the volume of the figure?

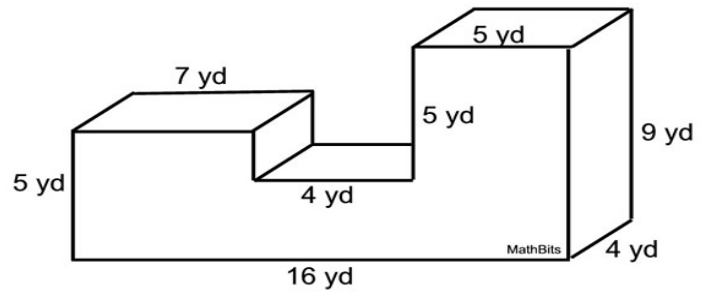


Jason is filling the pool with water. He stops in $\frac{1}{5}$ of the pool. How many cubed units have been filled?

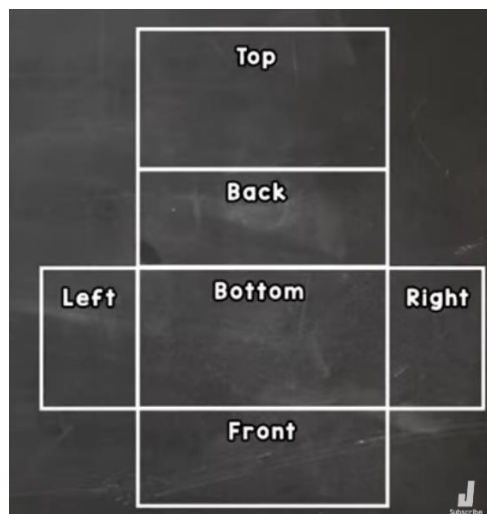
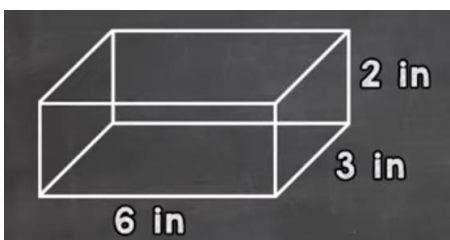


Pool measures: 10 meters x 11 meters x 3 meters

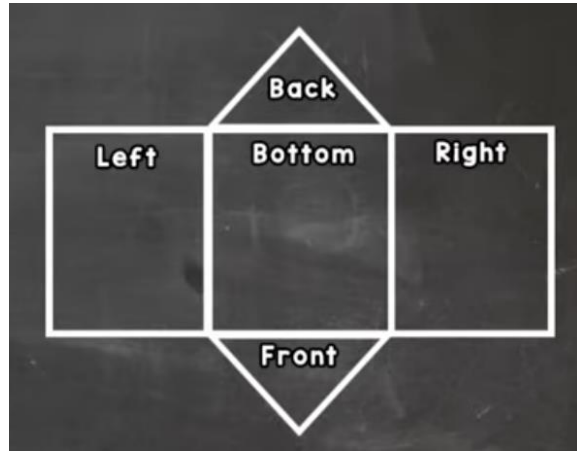
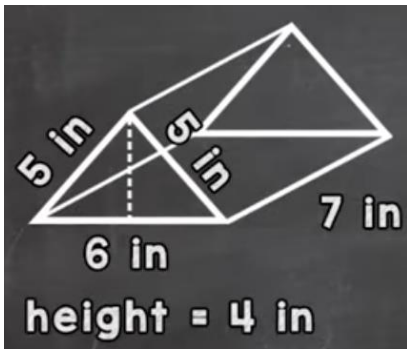
This irregular solid is composed of three solids. What kind of solids are they? What is the volume of each solid? What is the total volume?



Find the surface area of the solid.



Find the surface area of the solid.



DIVISIBILITY RULES

2 if the last number is even

3 if the sum of the digits is divisible by 3

4 if the last 2 digits is a number divisible by 4

5 if the last number is a 0 or a 5

6 if the number is divisible by 2 and 3

7 if you double the last digit, subtract it from the rest of the number and that number is divisible by 7

8 if the last 3 digits are divisible by 8

9 if the sum of the digits is 9 or divisible by 9

10 if the number ends with a 0

11 if you take the alternating sum of the digits in the number, read from left to right. If that is divisible by 11, so is the original number.

12 if the number is divisible by 3 and 4

A NUMBER IS DIVISIBLE IF IT CAN BE DIVIDED EVENLY WITH NO REMAINDER

According to the above picture, solve the following exercises:

Divisible by 3 and 9:

Divisible by 4 and 6:

Divisible by 2 and 5:

Divisible by 4 and 9:

Divisible by 3 and 5:

Divisible by 2 and 9:

Divisible by 6 and 5:

power the number of times a base number is multiplied by itself, indicated by a small number to its upper-right

$5^4 = 5 \times 5 \times 5 \times 5 = 625$

 (The number 4 is labeled "power, index, exponent or order" with an arrow pointing to it. The number 5 is labeled "base" with an arrow pointing to it. The expression $5 \times 5 \times 5 \times 5$ is labeled "expanded" and the number 625 is labeled "value".)

power, index, exponent and order all refer to the same thing

| Power, Index or Exponent | Read as | Expanded | Value |
|--------------------------|--|---|--------|
| Base 3^2 | three squared or three to the power of two | 3×3 | 9 |
| 5^3 | five cubed or five to the power of three | $5 \times 5 \times 5$ | 125 |
| 10^4 | ten to the power of four | $10 \times 10 \times 10 \times 10$ | 10 000 |
| 4^5 | four to the power of five | $4 \times 4 \times 4 \times 4 \times 4$ | 1024 |

According to the above picture, solve the following exercises:

| Number | Base | Exponent | Expanded notation | Standard notation |
|--------|------|----------|--|-------------------|
| 2^3 | 2 | | $2 \times 2 \times 2$ | 8 |
| 3^2 | | 2 | | 9 |
| 5^4 | | | $5 \times 5 \times 5 \times 5$ | |
| | 6 | 2 | | |
| | 8 | | $8 \times 8 \times 8$ | |
| | | | $9 \times 9 \times 9 \times 9 \times 9 \times 9$ | |
| 10^3 | | | | |
| | 7 | | | 49 |
| | 2 | | | 16 |
| | | 3 | | 27 |
| 21^3 | | | | |
| 11^4 | | | | |
| | 8 | 5 | | |
| 7^3 | | | | |

According to the pictures shown below, complete the information:

Prime Factorization

$$\begin{array}{l}
 \sqrt{784} \\
 \hline
 784 \quad | \quad \begin{array}{c} (2) \\ (2) \\ (2) \\ (2) \\ (7) \\ (7) \end{array} \\
 \hline
 392 \\
 \hline
 196 \\
 \hline
 98 \\
 \hline
 49 \\
 \hline
 7 \\
 \hline
 1
 \end{array}
 = \sqrt{2^2 \times 2^2 \times 7^2}
 = 2 \times 2 \times 7
 = 28$$

$$\sqrt{784} = 28$$

Prime Factorization

| | | |
|------------------|------|---|
| $\sqrt[3]{1728}$ | 1728 | 2 |
| | 864 | 2 |
| | 432 | 2 |
| | 216 | 2 |
| | 108 | 2 |
| | 54 | 2 |
| | 27 | 3 |
| | 9 | 3 |
| | 3 | 3 |
| | 1 | |

$$\begin{aligned}
 &= \sqrt[3]{2^3 \times 2^3 \times 3^3} \\
 &= 2 \times 2 \times 3 \\
 &= 12 \\
 \sqrt[3]{1728} &= 12
 \end{aligned}$$

| PRIME DECOMPOSITION | POWER | ROOT |
|---------------------|--------|------------------|
| | 13^2 | |
| | | $\sqrt[6]{4096}$ |
| | 15^3 | |
| | | $\sqrt{900}$ |

| | | |
|--|-------|--|
| | | |
| | 7^4 | |