

Pit House Project Note Booklet

Name: _____

Teacher: _____

Block: _____

School Year: _____

Note: Show ALL of your work because you will need to reference these calculations and notes throughout the project

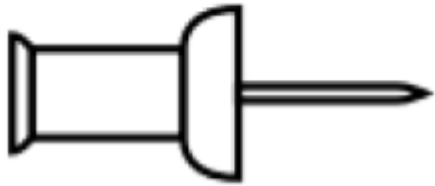
1. Measurement

Notes:

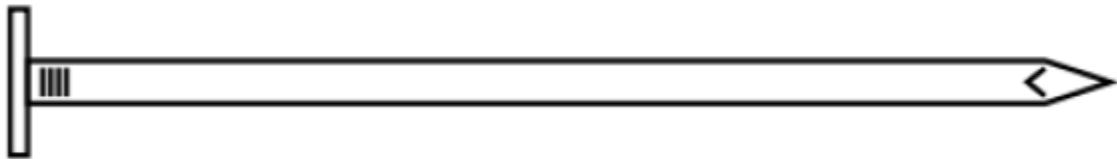
Extra Notes to Self

Problems:

1) How many millimeters?

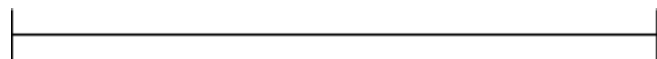


2) How many centimeters?



3) Draw a line that is 6.25 cm long using a ruler:

4) What is the length in cm AND in mm of the following line?

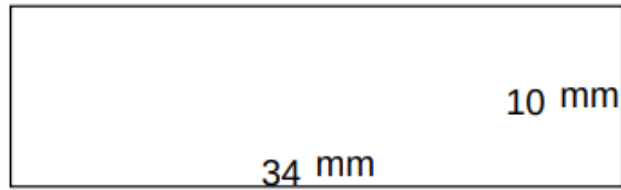


3. Area

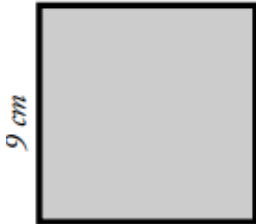
Notes:

Problems:

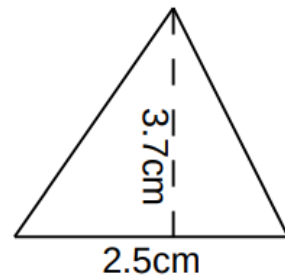
- 1) What is the area of the following rectangle?



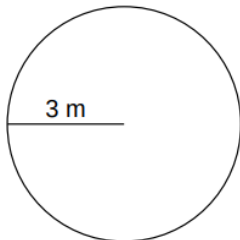
- 2) What is the area of the following square?



- 3) What is the area of the following triangle?



- 4) What is the area of the following circle?

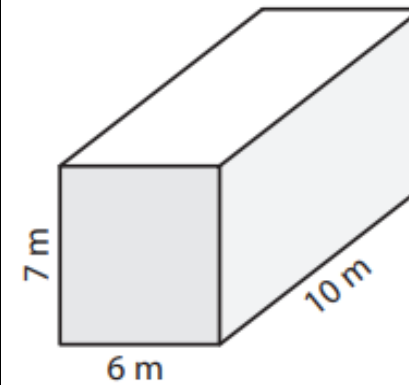


8. Volume

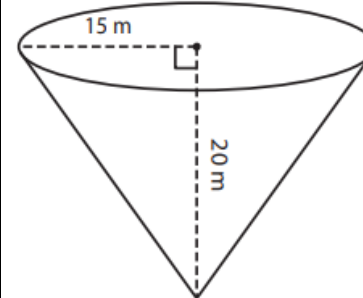
Notes:

Problems:

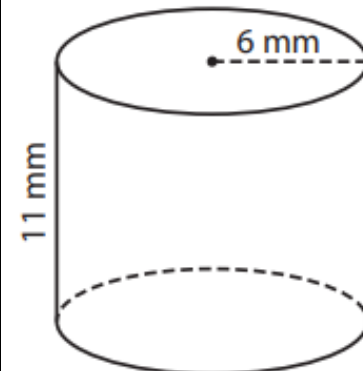
- 1) Find the volume of the rectangular prism:



- 2) Find the volume of the cone:



- 3) Find the volume of the cylinder:

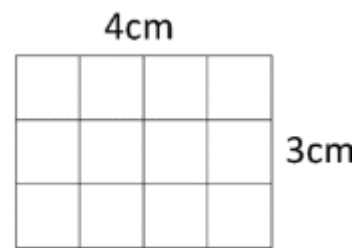


9. Scale Factor - Extension

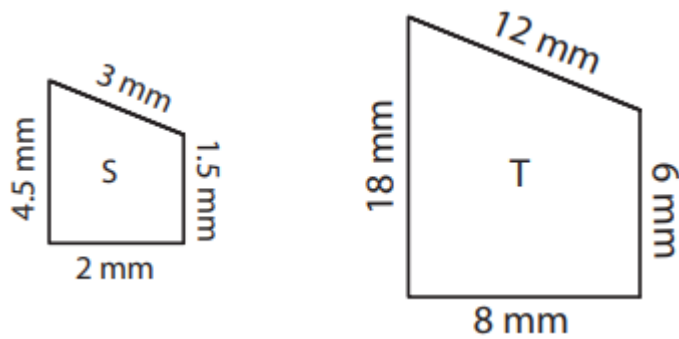
Notes:

Problems:

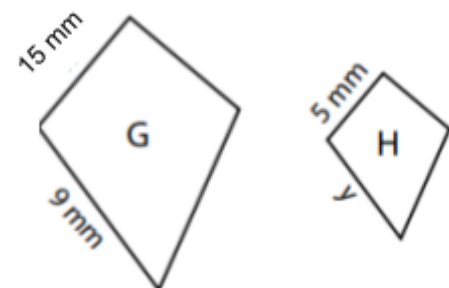
1) Given the image below, what will be the new length and width of the rectangle if we use a scale factor of 3?



2) What is the scale factor between these two images?



3) Find the missing side length:

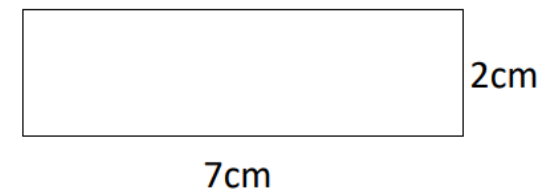


2. Perimeter

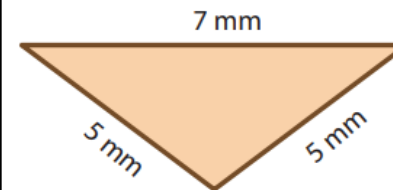
Notes:

Problems:

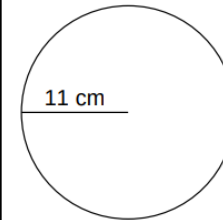
1) Find the perimeter of the rectangle:



2) Find the perimeter of the triangle:



3) Find the perimeter of the circle:

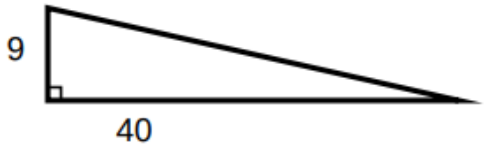


5. Pythagorean Theorem

Notes:

Problems:

1) Find the missing hypotenuse:



A right-angled triangle with a vertical leg of length 9 and a horizontal leg of length 40. The right angle is at the bottom-left corner. The hypotenuse is the longest side, sloping upwards from left to right.

2) Find the missing side:



A right-angled triangle with a vertical leg of length 48 and a hypotenuse of length 73. The right angle is at the bottom-left corner. The horizontal leg is missing.

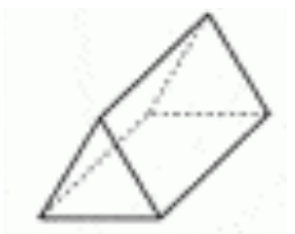
3) Can you make a right angle triangle out of a triangle with sides 4, 5, and 3? Justify your answer using Pythagoras' Theorem:

6. Net Diagrams and 3D Views

Notes:


Problems:

1) Draw the net, top, side, and front view of the shape to the right using a ruler:




A 3D perspective drawing of a triangular prism. The front face is a triangle, and the back face is a congruent triangle. The two faces are connected by three vertical edges. Hidden edges are shown as dashed lines.

a) Net:




A 10x10 grid provided for drawing the net of the triangular prism.

Top:



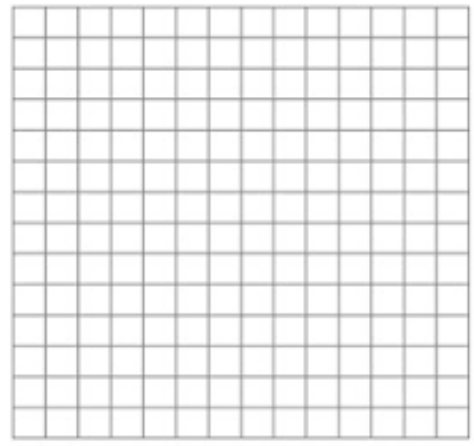
A 10x10 grid provided for drawing the top view of the triangular prism.

b) Side:



A 10x10 grid provided for drawing the side view of the triangular prism.

Front:



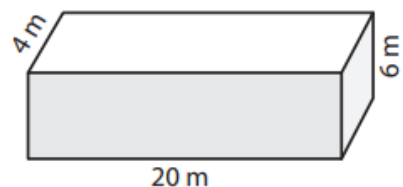
A 10x10 grid provided for drawing the front view of the triangular prism.

7. Surface Area

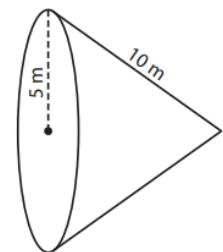
Notes:

Problems:

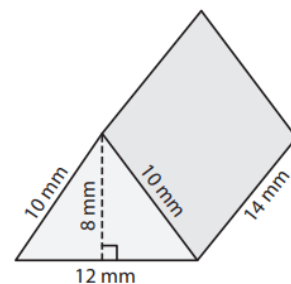
- 1) Find the surface area of the following rectangular prism:



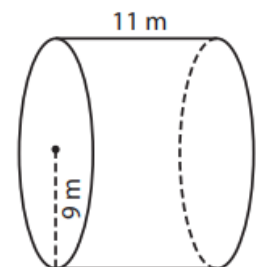
- 2) Find the surface area of the following cone:



- 3) Find the surface area of the triangular prism:



- 4) Find the surface area of the cylinder:



4. Squares and Square Roots

Notes:

Problems:

- 1) Write the following squares in multiplication form:

a) $3^2 =$

b) $9^2 =$

c) $2 \cdot 4^2 =$

d) $13 \cdot 1^2 =$

- 2) Find the squares of the following numbers:

a) $2^2 =$

b) $5^2 =$

c) $7 \cdot 3^2 =$

d) $11 \cdot 7^2 =$

- 3) Find the square root of the following numbers:

a) $\sqrt{64} =$

b) $\sqrt{36} =$

c) $\sqrt{2.56} =$

d) $\sqrt{156.25} =$