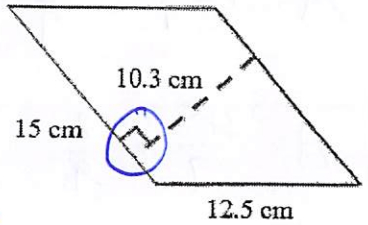
Unit F[illegible]ometry
Unit Review Packet

Name Key

Directions: Do ALL (A) Questions. Check Your Answers to (A) Questions. If ALL (A) Questions are correct, skip (B) Questions and move onto next "I can" statement. If you get any (A) Questions wrong, MAKE CORRECTIONS and do ALL (B) Questions.

"I Can Find the Area of Squares, Rectangles, Parallelograms, Triangles, and Trapezoids using the Appropriate Formula."

A1: Find the area of the Parallelogram.

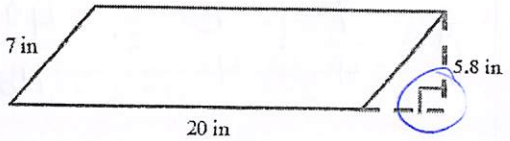


$A = b \cdot h$

$A = 15 \cdot 10.3$

$A = 154.5 \text{ cm}^2$

B1: Find the area of the Parallelogram.

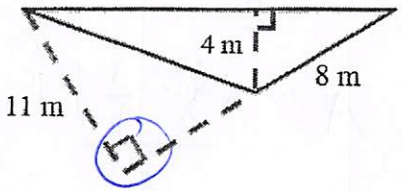


$A = b \cdot h$

$A = 20 \cdot 5.8$

$A = 116 \text{ in}^2$

A2: Find the area of the Triangle.

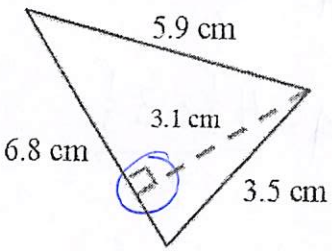


$A = \frac{b \cdot h}{2}$

$A = \frac{8 \cdot 11}{2}$

$A = 44 \text{ m}^2$

B2: Find the area of the Triangle.

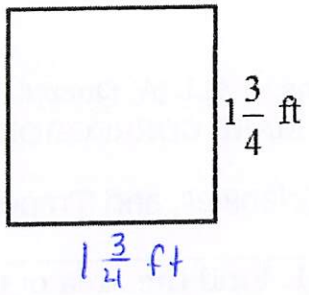


$A = \frac{b \cdot h}{2}$

$A = \frac{6.8 \cdot 3.1}{2}$

$A = 10.54 \text{ cm}^2$

A3: Find the Area of the Square.



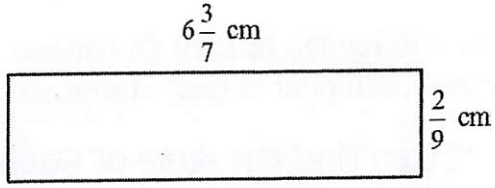
$A = b \cdot h$

$A = 1\frac{3}{4} \cdot 1\frac{3}{4}$

$A = \frac{7}{4} \cdot \frac{7}{4} = \frac{49}{16}$

$A = 3\frac{1}{16}$ ft^2

B3: Find the Area of the Rectangle.



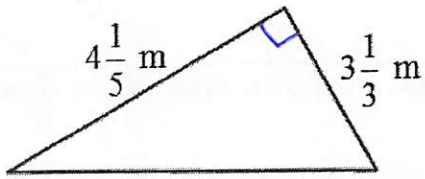
$A = b \cdot h$

$A = 6\frac{3}{7} \cdot \frac{2}{9}$

$A = \frac{^{5}45}{7} \cdot \frac{2}{\cancel{9}_{1}} = \frac{10}{7}$

$A = 1\frac{3}{7}$ cm^2

A4: Find the Area of the Right Triangle.



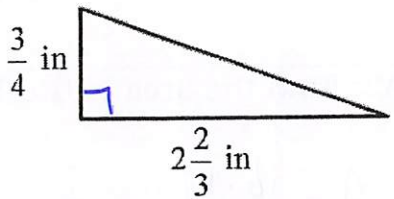
$A = \frac{b \cdot h}{2}$

$A = \frac{4\frac{1}{5} \cdot 3\frac{1}{3}}{2}$

$A = \frac{^{7}\frac{\cancel{21}}{\cancel{5}_{1}} \cdot \frac{\cancel{10}^{2}}{\cancel{3}_{1}}}{2} = \frac{14}{2}$

$A = 7$ m^2

B4: Find the Area of the Right Triangle.



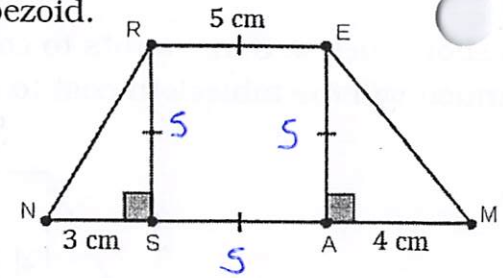
$A = \frac{b \cdot h}{2}$

$A = \frac{2\frac{2}{3} \cdot \frac{3}{4}}{2}$

$A = \frac{^{2}\frac{\cancel{8}}{\cancel{3}_{1}} \cdot \frac{\cancel{3}^{1}}{\cancel{4}_{1}}}{2} = \frac{2}{2}$

$A = 1$ in^2

A5: Find the Area of the Trapezoid.



$A = \frac{h \cdot (b_1 + b_2)}{2}$

$A = ?$

$h = 5$ cm

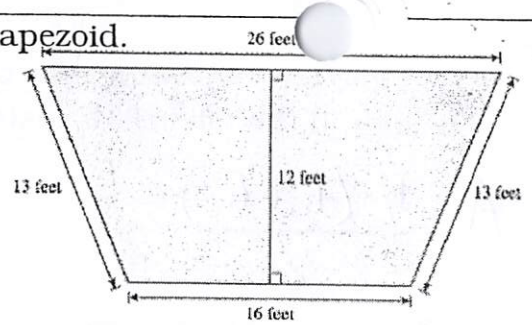
$b_1 = 5$ cm

$b_2 = 12$ cm

$A = \frac{5 \cdot (5 + 12)}{2}$

$A = 42.5 \text{ cm}^2$

B5: Find the Area of the Trapezoid.



$A = \frac{h \cdot (b_1 + b_2)}{2}$

$A = ?$

$h = 12$ ft

$b_1 = 26$ ft

$b_2 = 16$ ft

$A = \frac{12 \cdot (26 + 16)}{2}$

$A = 252 \text{ ft}^2$

A6: A farmer fenced in an area of his farm that is a rectangle in shape. The length of the fence is $\frac{3}{5}$ mile. The area enclosed by the fence is $\frac{1}{2}$ square mile. What is the width of the farmer's fence?

$A = b \cdot h$

$A = l \cdot w$

$\frac{1}{2} = \frac{3}{5} \cdot w$

$\frac{1}{2} \div \frac{3}{5} = \frac{3}{5} \cdot w \div \frac{3}{5}$

$\frac{1}{2} \cdot \frac{5}{3} = w$

$\frac{5}{6} = w$

Width

$\frac{5}{6}$ mile

B6: The area of a parallogram is 24 cm². The height measures $4\frac{4}{5}$ cm. What is the measure of the base?

$A = b \cdot h$

$24 = b \cdot 4\frac{4}{5}$

$\div 4\frac{4}{5} \quad \div 4\frac{4}{5}$

$24 \div 4\frac{4}{5} = b$

$\frac{24}{1} \div \frac{24}{5} = b$

$\frac{24}{1} \cdot \frac{5}{24} = b$

$5 = b$

Base

5 cm

A7: A table top consisting of two trapezoids joined together is shown below. Jerry wants to cover the table top with a tablecloth. If the tablecloth costs $0.45 per square foot, how much will the tablecloth cost to cover the table?

$A = \frac{h \cdot (b_1 + b_2)}{2}$

$A = ?$

$h = 4$ ft

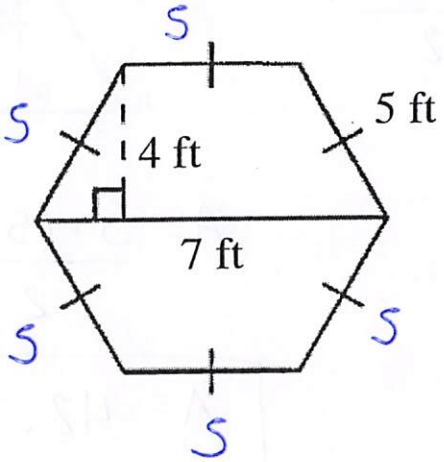
$b_1 = 5$ ft

$b_2 = 7$ ft

$A = \frac{4 \cdot (5+7)}{2}$

$A = 24$ ft^2

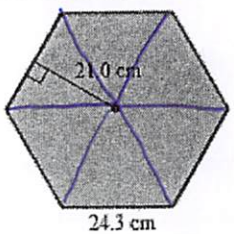
$\times 2$



Total Area = 48 ft^2 x \$0.45 per ft^2 = **\$21.60**

"I Can Find the Area of Regular and Irregular Figures by Decomposing them into Rectangles and Triangles."

A1: Find the Area of the Hexagon.



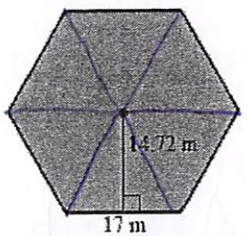
Hexagon is broken up into 6 = Δ's

$A = \frac{6 \cdot h}{2}$

$A = \frac{24.3 \cdot 21}{2}$

$A = 255.15$ x 6 Δ's = **1530.9 cm^2**

B1: Find the Area of the Hexagon.



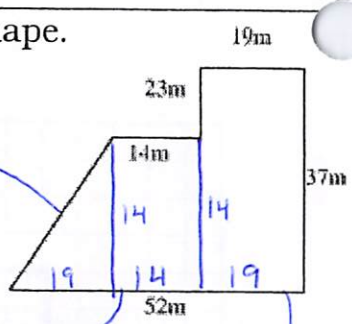
$A = \frac{6 \cdot h}{2}$

$A = \frac{17 \cdot 14.72}{2}$

$A = 125.12$

x 6 Δ's = **750.72 m^2**

A2: F…ne Area of the Irregular Shape.



$A = \frac{6 \cdot h}{2}$

$A = \frac{19 \cdot 14}{2}$

$A = 133\ m^2$

$A = b \cdot h$

$A = 14 \cdot 14$

$A = 196\ m^2$

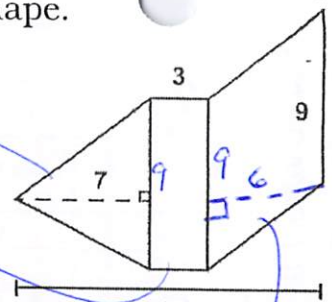
$A = 6 \cdot h$

$A = 19 \cdot 37$

$A = 703\ m^2$

Area = 1032 m^2

B2: Find the Area of the Irregular Shape.



$A = \frac{6 \cdot h}{2}$

$A = \frac{9 \cdot 7}{2}$

$A = 31.5$

$A = 6 \cdot h$

$A = 9 \cdot 3$

$A = 27$

$A = 6 \cdot h$

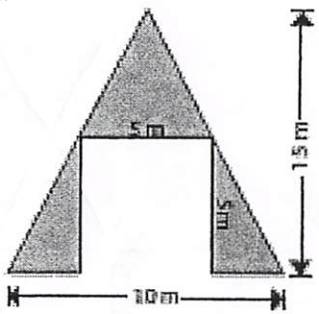
$A = 9 \cdot 6$

$A = 54$

Area = 112.5 units^2

"I Can Find the Area of the Shaded Region by Subtracting the Smaller Area from the Larger Area."

A1: Find the Area of the Shaded Region.



Big Δ − Square

$A = \frac{6 \cdot h}{2}$

$A = \frac{10 \cdot 15}{2}$

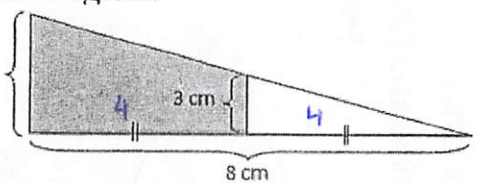
$A = 75\ m^2$ − $A = 25\ m^2$

$A = 6 \cdot h$

$A = 5 \cdot 5$

Shaded Area = 50 m^2

B1: Find the Area of the Shaded Region.



Big Δ − Small Δ

$A = \frac{6 \cdot h}{2}$

$A = \frac{8 \cdot 6}{2}$

$A = 24\ cm^2$ − $A = 6\ cm^2$

$A = \frac{b \cdot h}{2}$

$A = \frac{4 \cdot 3}{2}$

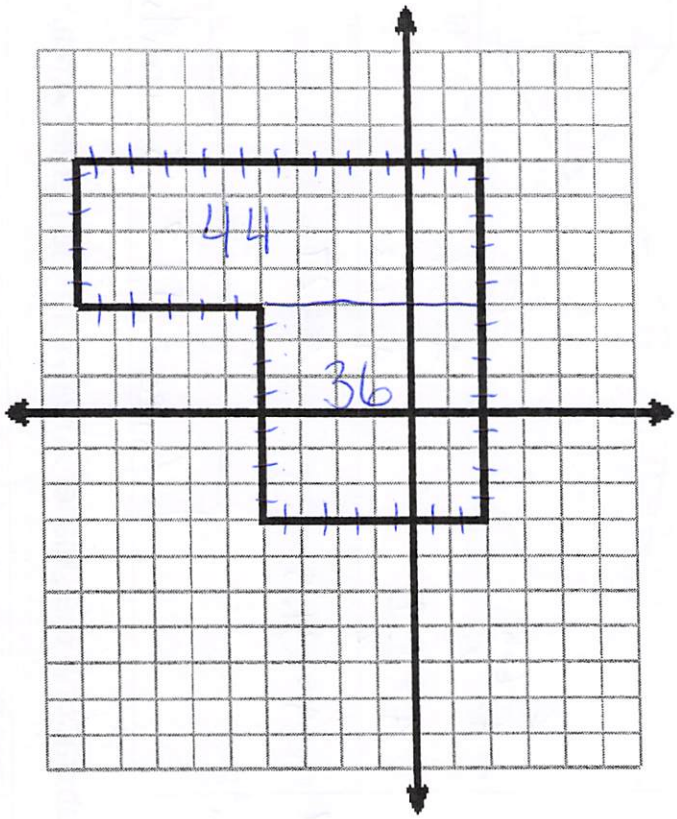
A = 18 cm^2

"I Can Draw Polygons in the Coordinate Plane and Use Various Strategies to Calculate the Area of the Polygon and Determine the Lengths of the Sides to Find the Perimeter of the Polygon."

A1:

Area: 80 units²

Perimeter: 42 units



If the polygon represents the shape of a park and each unit represents 15 meters, what is the perimeter of the park?

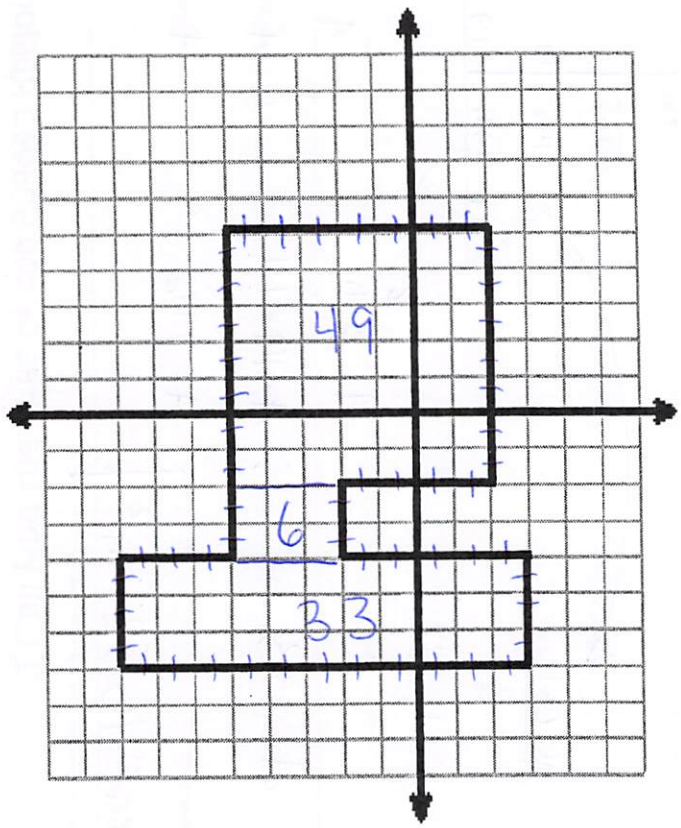
42 x 15

630 meters

B1:

Area: 88 units²

Perimeter: 54 units

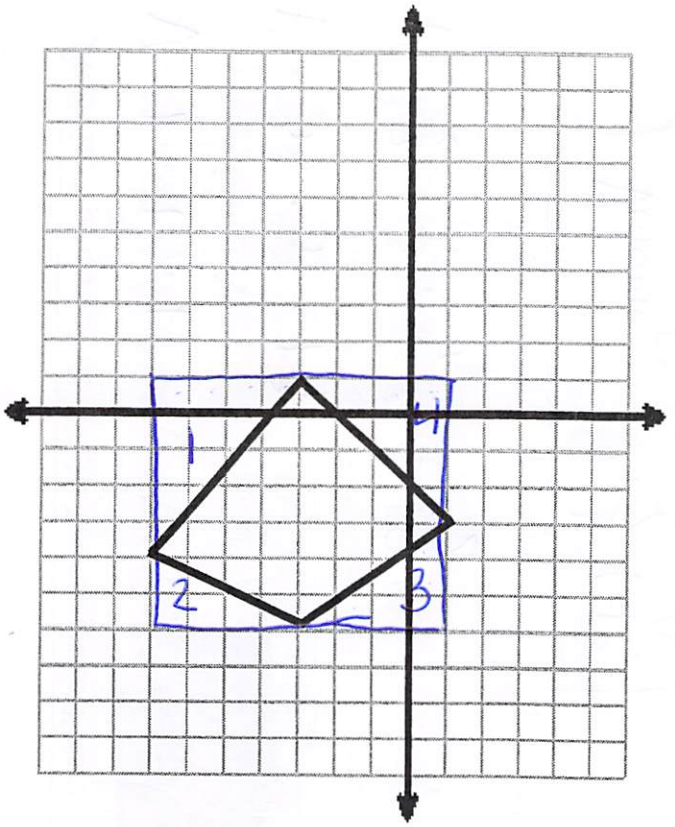


Bill plans to build a pool in the following shape. If each unit represents 2 feet, what would be the perimeter of the pool?

54 x 2

108 feet

A2: Find the Area of the Polygon.



Box: $b \cdot h$ $8 \cdot 7 = 56$ units^2

$\Delta 1$: $\frac{b \cdot h}{2}$ $\frac{4 \cdot 5}{2} = 10$ units^2

$\Delta 2$: $\frac{b \cdot h}{2}$ $\frac{4 \cdot 2}{2} = 4$ units^2

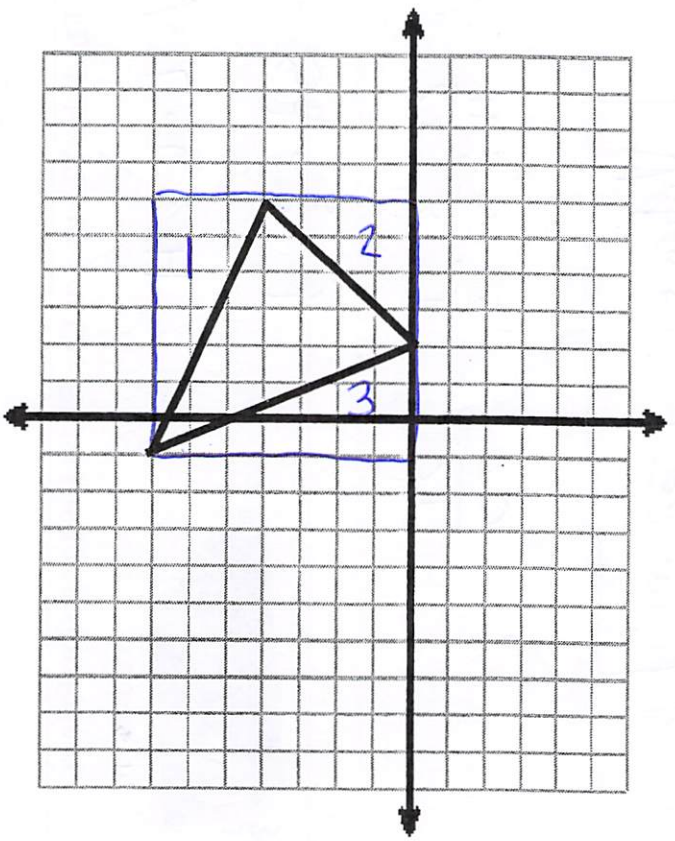
$\Delta 3$: $\frac{b \cdot h}{2}$ $\frac{4 \cdot 3}{2} = 6$ units^2

$\Delta 4$: $\frac{b \cdot h}{2}$ $\frac{4 \cdot 4}{2} = 8$ units^2

$56 - 10 = 46$, $46 - 4 = 42$, $42 - 6 = 36$, $36 - 8 = 28$

Area = 28 units^2

B2: Find the Area of the Triangle.



Box: $b \cdot h$ $7 \cdot 7 = 49$ units^2

$\Delta 1$: $\frac{b \cdot h}{2}$ $\frac{7 \cdot 3}{2} = 10.5$ units^2

$\Delta 2$: $\frac{b \cdot h}{2}$ $\frac{4 \cdot 4}{2} = 8$ units^2

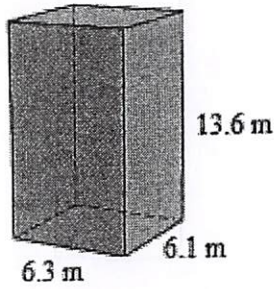
$\Delta 3$: $\frac{b \cdot h}{2}$ $\frac{7 \cdot 3}{2} = 10.5$ units^2

$49 - 10.5 = 38.5$, $38.5 - 8 = 30.5$, $30.5 - 10.5 = 20$

Area = 20 units^2

"I Can Find the Volume of a Right Rectangular Prism by Applying the Appropriate Formula."

A1: Find the Volume of the Right Rectangular Prism.
Round to the *nearest tenth*.

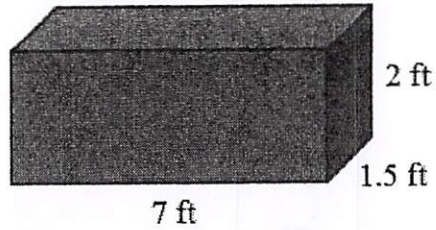


$V = L \cdot W \cdot H$

$V = 6.3 \cdot 6.1 \cdot 13.6$

$V = 522.6 \text{ m}^3$

B1: Find the Volume of the Right Rectangular Prism.

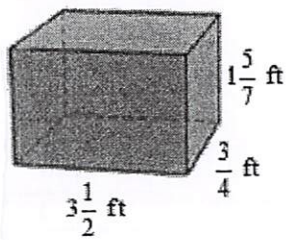


$V = L \cdot W \cdot H$

$V = 7 \cdot 1.5 \cdot 2$

$V = 21 \text{ ft}^2$

A2: Find the Volume of the Right Rectangular Prism.



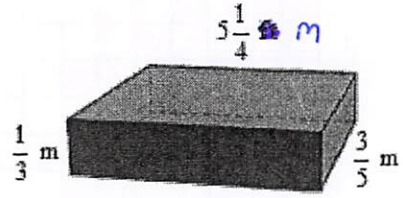
$V = L \cdot W \cdot H$

$V = 3\frac{1}{2} \cdot \frac{3}{4} \cdot 1\frac{5}{7}$

$V = \frac{7}{2} \cdot \frac{3}{4} \cdot \frac{12}{7} = \frac{9}{2}$

Volume = $4\frac{1}{2}$ ft^3

B2: Find the Volume of the Right Rectangular Prism.



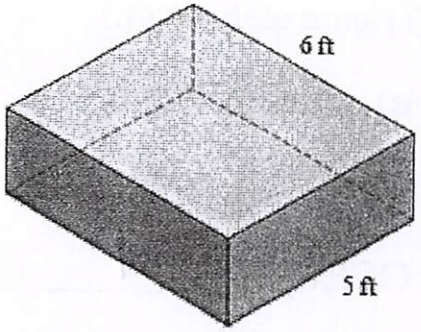
$V = L \cdot W \cdot H$

$V = 5\frac{1}{4} \cdot \frac{3}{5} \cdot \frac{1}{3}$

$V = \frac{21}{4} \cdot \frac{3}{5} \cdot \frac{1}{3} = \frac{21}{20}$

Volume = $1\frac{1}{20}$ m^3

A3: The Volume of the Right Rectangular Prism below is 187.2 ft^3. Find the height of the prism.



187.2 ft^3

$V = L \cdot W \cdot H$

$187.2 = 5 \cdot 6 \cdot H$

$187.2 = 30 \cdot H$

$\div 30 \quad \div 30$

$6.24 = H$

Height = 6.24 ft

B3: The Volume of a Right Rectangular Prism is $\frac{1}{9}$ cm^3. If the length is $\frac{1}{3}$ cm and the height is $\frac{2}{3}$ cm, what is width of the prism?

$V = L \cdot W \cdot H$

$\frac{1}{9} = \frac{1}{3} \cdot W \cdot \frac{2}{3}$

$\frac{1}{9} = \frac{2}{9} \cdot W$

$\frac{1}{9} \div \frac{2}{9} \quad \div \frac{2}{9}$

$\frac{1}{9} \cdot \frac{9}{2} = W$

Width = $\frac{1}{2}$ cm

A4: Find the Volume of a Cube if the area of the base is 36 cm^2.

Area of base = 36 cm^2

↘ 6 cm · 6 cm

*Cube has side length 6cm

$V = B \cdot H$

↖ Area of Base

$V = 36 \cdot 6$

$V = 216\ cm^3$

B4: Find the Volume of a Right Rectangular Prism that has a base with an area of $4\frac{2}{3}$ in^2 and a height of $\frac{3}{4}$ in.

$V = B \cdot H$

$V = 4\frac{2}{3} \cdot \frac{3}{4}$

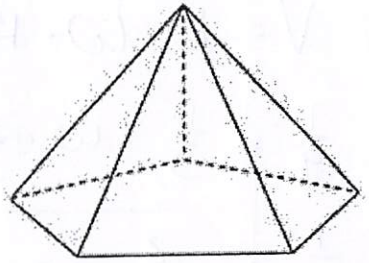
$V = \frac{14}{3} \cdot \frac{3}{4} = \frac{7}{2}$

Volume = $3\frac{1}{2}$ in^3

"I Can Identify Faces, Edges, and Vertices of 3D Figures."
"I Can Represent a 3D Figure with a Net."

A1: Find the Number...

Pentagonal Pyramid



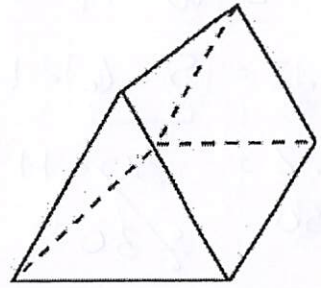
Of Faces 6

Of Edges 10

Of Vertices 6

B1: Find the Number...

Triangular Prism



Of Faces 5

Of Edges 9

Of Vertices 6

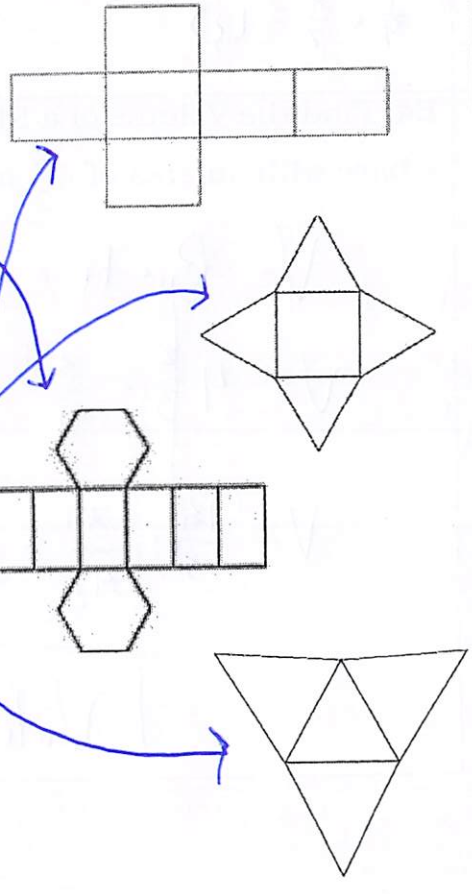
A2: Match the Net With the 3D Figure (Draw Line)

Hexagonal Prism

Triangular Pyramid

Rectangular Prism

Square Pyramid



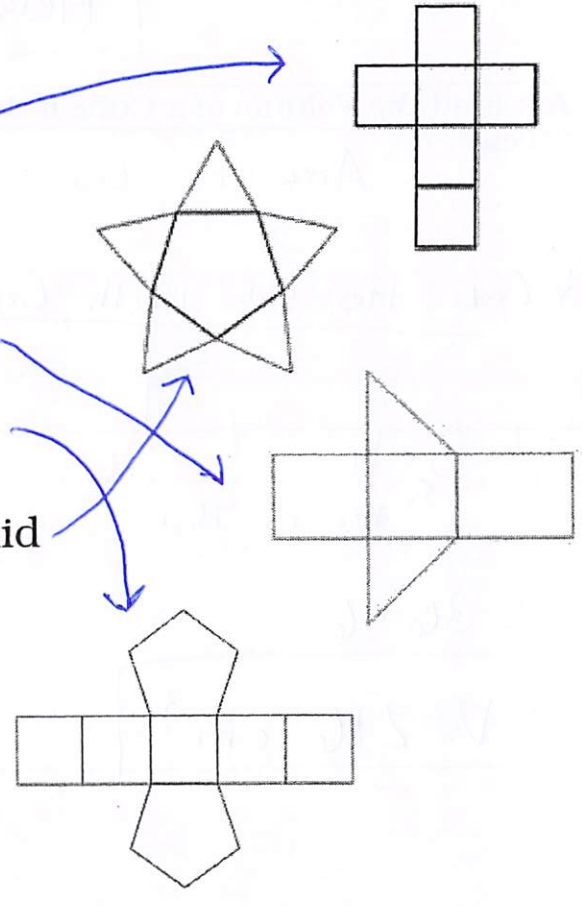
B2: Match the Net With the 3D Figure (Draw Line)

Cube

Triangular Prism

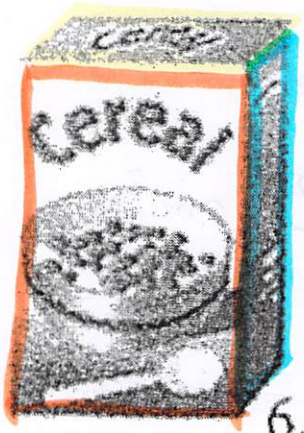
Pentagonal Prism

Pentagonal Pyramid



"I Can Find the Surface Area of a 3D Figure by Finding the Area of Each of its Faces With and Without the Use of a Net."

: Find the Surface Area



Surface Area =

1726 cm^2

$A = b \cdot h$

$A = 19 \cdot 6.5$

$A = 123.5\ cm^2$

19cm

Top (123.5)

6.5cm

$A = b \cdot h$

$A = 19 \cdot 29$

$A = 551\ cm^2$

29 cm

Side (188.5) | Back (551) | Side (188.5) | Front (551)

29 cm

6.5cm

19cm

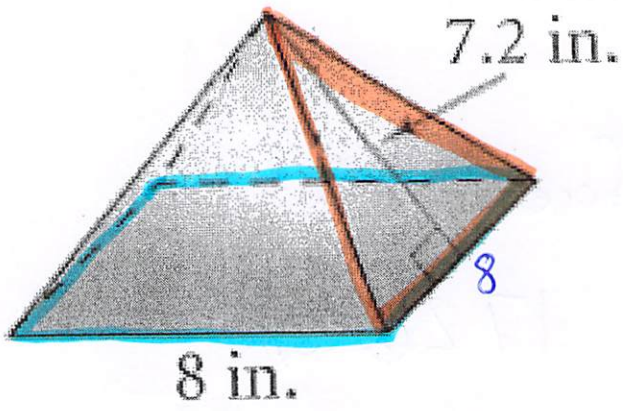
Bottom (123.5)

$A = b \cdot h$

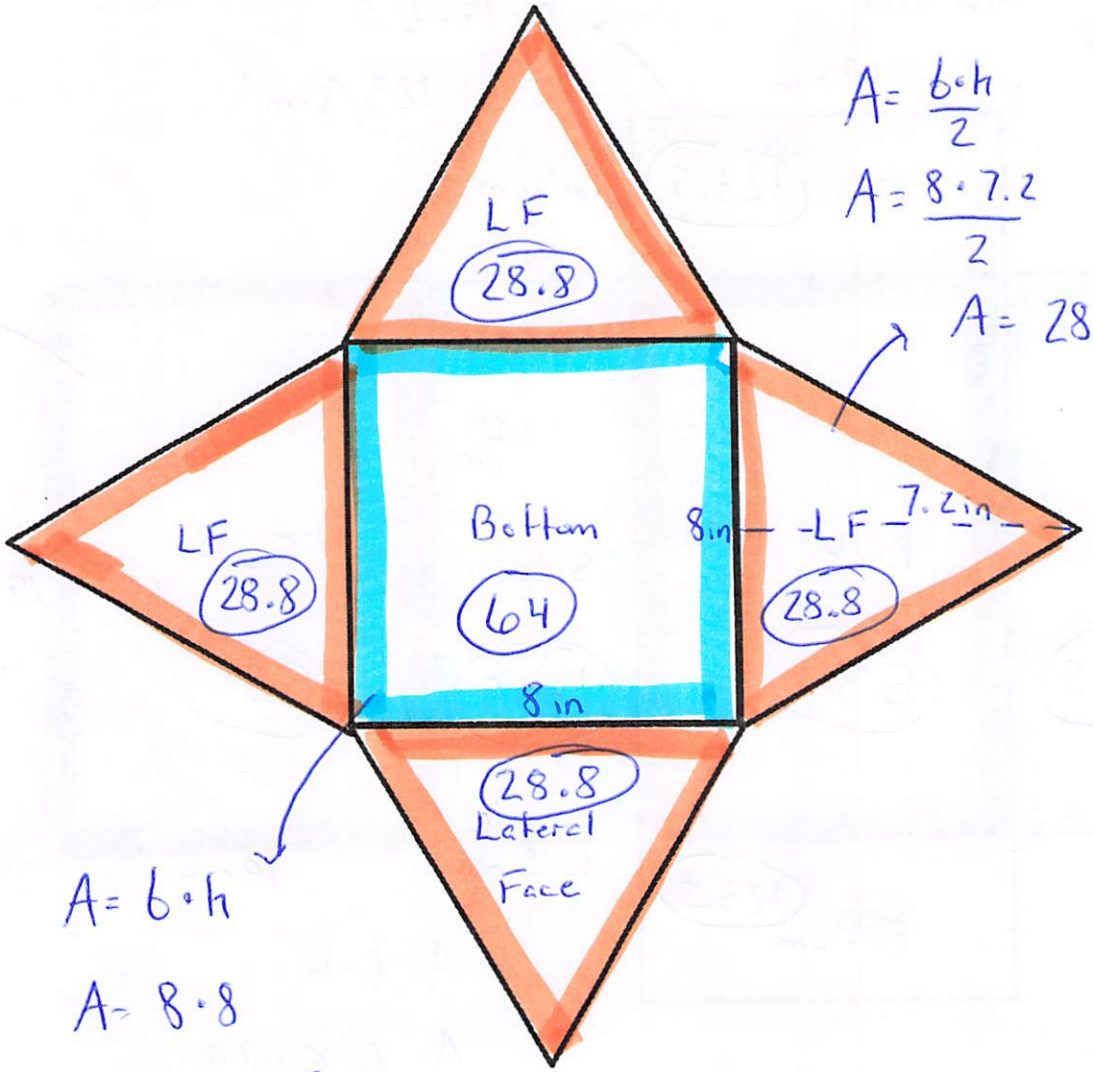
$A = 6.5 \cdot 29$

$A = 188.5\ cm^2$

A2: Find the Surface Area of the Square Pyramid



Surface Area = 179.2 cm^2



$A = \frac{b \cdot h}{2}$

$A = \frac{8 \cdot 7.2}{2}$

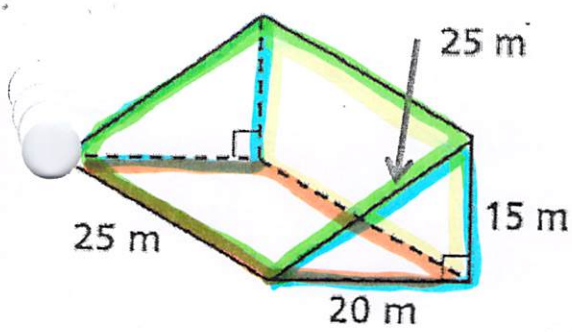
$A = 28.8\ in^2$

$A = b \cdot h$

$A = 8 \cdot 8$

$A = 64\ in^2$

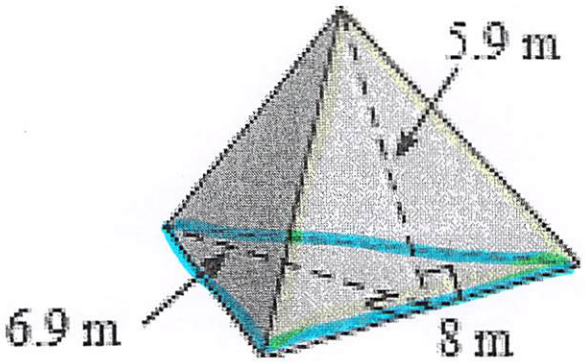
A3. Find the Surface Area



Δ Bases x2 $A = \frac{b \cdot h}{2}$ $A = \frac{20 \cdot 15}{2}$ $A = 150\ m^2$ x 2 Δ's	Bottom □ $A = b \cdot h$ $A = 25 \cdot 20$ $A = 500\ m^2$
$A = 300\ m^2$	Back □ $A = b \cdot h$ $A = 25 \cdot 15$ $A = 375\ m^2$
	Front □ $A = b \cdot h$ $A = 25 \cdot 25$ $A = 625\ m^2$

Surface Area = $1800\ m^2$

A4: Find the Surface Area



Bottom Δ $A = \frac{b \cdot h}{2}$ $A = \frac{8 \cdot 6.9}{2}$ $A = 27.6\ m^2$	3 side Δ's x 3 $A = \frac{b \cdot h}{2}$ $A = \frac{8 \cdot 5.9}{2}$ $A = 23.6$ x 3 Δ's
	$A = 70.8\ m^2$
	Surface Area $98.4\ m^2$