



# Bees and Their Hives

NAME: .....

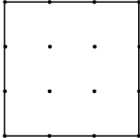
CLASS: .....

DATE: .....



## Basic

1) Tessellate using the following shapes. (Use at least four more of each shape in your tessellation.)

a)  .....

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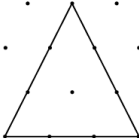
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b)  .....

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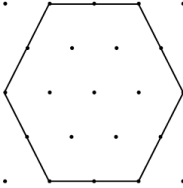
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c)  .....

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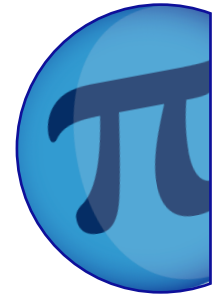


# Bees and Their Hives

NAME: .....

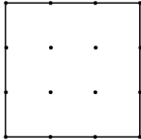
CLASS: .....

DATE: .....



## Core

1) Tessellate using the following shapes. (Use at least four more of each shape in your tessellation.)

a)  .....

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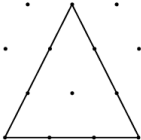
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b)  .....

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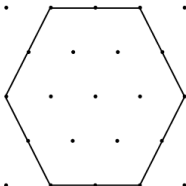
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c)  .....

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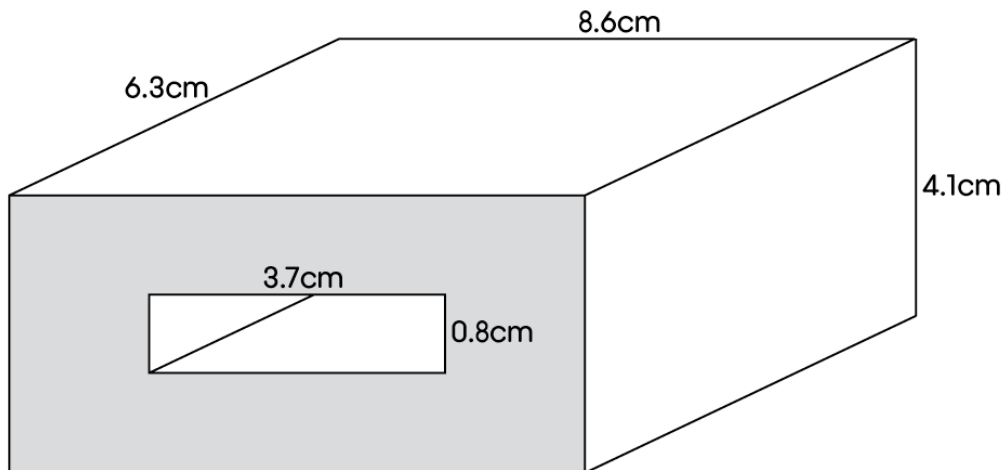
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# Bees and Their Hives

Core

2) Calculate the volume of the prism below.



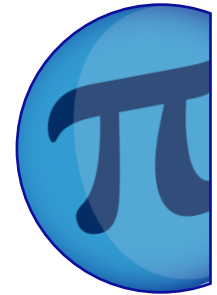


# Bees and Their Hives

NAME: .....

CLASS: .....

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## Advanced

1) The area of a square is  $l^2$ , where  $l$  is the length of a side.

Calculate the area of the following squares:

Length of side	Area
1cm	
2cm	
4cm	
8cm	

2) The area of an equilateral triangle is  $\frac{l^2\sqrt{3}}{4}$ , where  $l$  is the length of a side.

Calculate the area of the following equilateral triangles:

Length of side	Area
1cm	
2cm	
4cm	
8cm	

3) The area of a hexagon is  $\frac{3\sqrt{3}}{2}l^2$ , where  $l$  is the length of a side.

Calculate the area of the following hexagons:

Length of side	Area
1cm	
2cm	
4cm	
8cm	

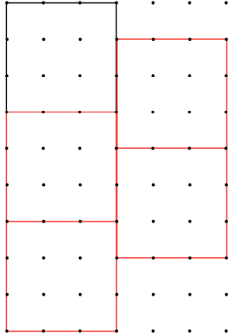


# Bees and Their Hives

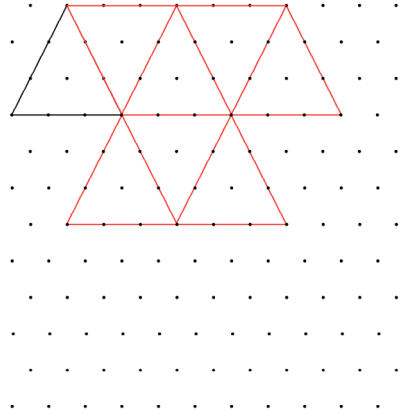
## ANSWERS

### Basic

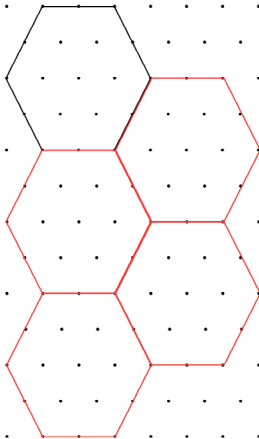
1) a)



b)

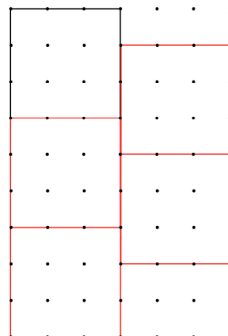


c)

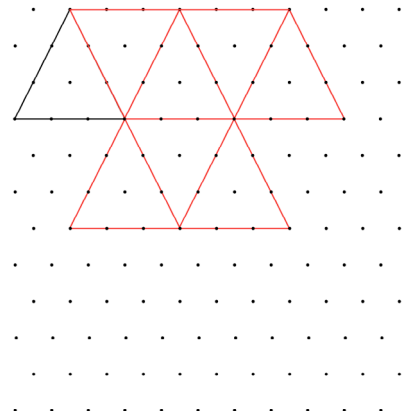


### Core

1) a)



b)

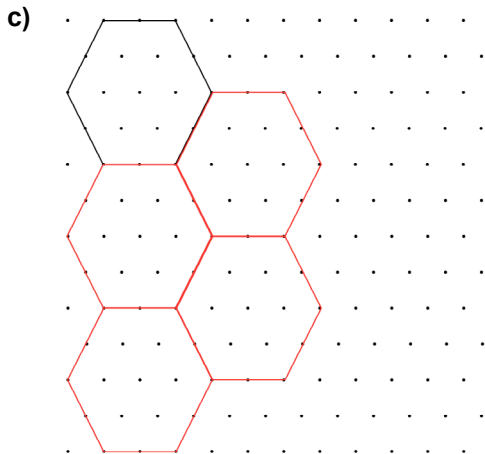




# Bees and Their Hives

## ANSWERS

### Core



2) Volume of prism =  $203.49\text{cm}^3$

### Advanced

#### 1) Areas of squares:

Length of side	Area
1cm	$1\text{cm}^2$
2cm	$4\text{cm}^2$
4cm	$16\text{cm}^2$
8cm	$64\text{cm}^2$

#### 2) Areas of equilateral triangles:

Length of side	Area
1cm	$0.43\text{cm}^2$
2cm	$1.73\text{cm}^2$
4cm	$6.93\text{cm}^2$
8cm	$27.71\text{cm}^2$

#### 3) Areas of hexagons:

Length of side	Area
1cm	$2.60\text{cm}^2$
2cm	$10.39\text{cm}^2$
4cm	$41.57\text{cm}^2$
8cm	$166.28\text{cm}^2$