



Preview – Information



Thank you for your interest in this product. Within this preview, you will see:

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Google Slides Lessons Preview





Manitoba Math Curriculum Shape & Space – Grade 5

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

Learning Goal

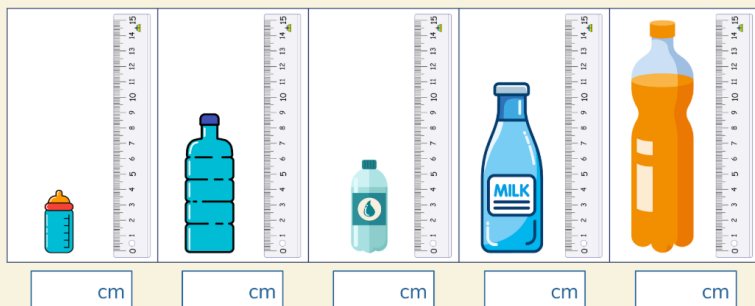
We are learning to use appropriate metric units to estimate and measure length so we can accurately determine and communicate the dimensions of various objects and spaces.



Measuring Height – Bottles

Measure the height of the bottles below. Drag the numbers to answer in the white box.

1 2 3 4 5 6 7 8 9 0



Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Measurement Word Problems

- 1) Paula and Gareth are running laps around the school field. Paula runs 2.6 km and Gareth runs 2,350 m. Who runs a longer distance?

- 2) Jenn jumped 259 cm and Chris jumped 3.01 m. Who jumped further?



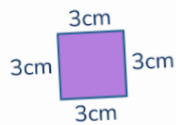


Manitoba Math Curriculum Shape & Space – Grade 5

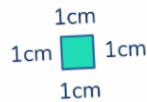
Finding the Perimeter of Squares

Find the perimeter of the squares below. Drag the numbers to complete the equations.

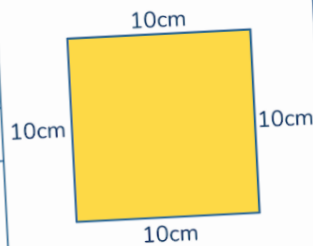
1 2 3 4 5 6 7 8 9 0



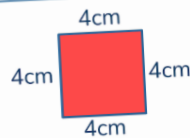
$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \text{ cm}$$



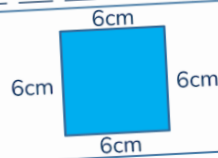
$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \text{ cm}$$



$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \text{ cm}$$



$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \text{ cm}$$

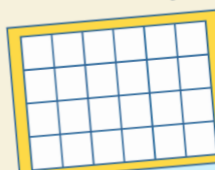


$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad} \text{ cm}$$

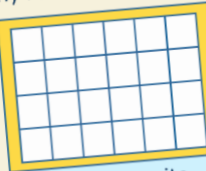
Perimeter = $\underline{\quad}$ cm Perimeter = $\underline{\quad}$ cm Perimeter = $\underline{\quad}$ cm

Perimeter = $\underline{\quad}$ cm Perimeter = $\underline{\quad}$ cm Perimeter = $\underline{\quad}$ cm

Drag as many red squares



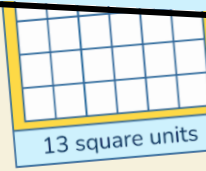
4 square units



7 square units



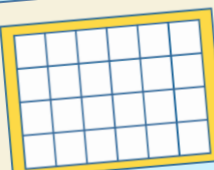
9 square units



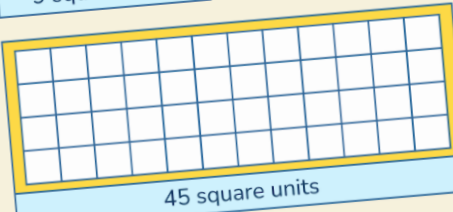
13 square units



21 square units



23 square units



45 square units



Manitoba Math Curriculum Shape & Space – Grade 5

Calculating Area – Amusement Centre

Calculate the area of the sections in the Amusement Centre.

The diagram shows the following sections and dimensions:

- Arcade Gaming: 8m (width), 4m (height)
- VR Section: 8m (width), 2m (height)
- Jumping Castle: 6m (width), 6m (height)
- Go Karting Area: 11m (width), 4m (height)
- Bowling Area: 9m (width), 6m (height)
- Entrance: 3m (width), 3m (height)
- Bathroom: 5m (width), 3m (height)

Store	Area
Entrance	
Arcade Gaming	
Jumping Castle	
VR Section	
Go Karting Area	
Bowling Area	
Bathroom	

Calculating Volume

Determine the length, width and height of the rectangular prisms and then calculate their volumes.

	Length	Height	Width	Volume

x	x	x
x	x	x
x	x	x



Workbook Preview



Grade 5

Shape and Space - Measurement

	Curriculum Expectations	Pages That Cover the Expectations
SS.1	Design and construct different rectangles given either perimeter or area, or both (whole numbers), and draw conclusions	14 - 43
SS.2	Preview of 50 pages from this product that contains 220 pages total.	
SS.3	Demonstrate an understanding of volume by: • selecting and justifying referents for cm³ or m³ units • estimating volume, using referents for cm³ or m³ • measuring and recording volume (cm³ or m³) • constructing right rectangular prisms for a given volume.	44 - 53
SS.4	Demonstrate an understanding of capacity by: • describing the relationship between mL and L • selecting and justifying referents for mL or L units • estimating capacity, using referents for mL or L • measuring and recording capacity (mL or L)	54 - 60

Name: _____

4

Curriculum Connection
SS.2

Measuring in Centimetres and Millimetres

Part 1

Use a ruler to measure the lines below

1)



_____ cm _____ mm

2)



_____ cm _____ mm

3)



_____ mm

4)



_____ cm _____ mm

5)



_____ cm _____ mm

6)



_____ cm _____ mm

7)



_____ cm _____ mm

Part 2

Draw a line that is the correct length

1)

70 mm

2)

4 cm

3)

60 mm

4)

2 cm

5)

3 cm

6)

50 mm

Name: _____

5

Curriculum Connection
SS.2

Measuring Real-Life Objects

Questions

Measure the length of the objects below



_____ mm



_____ mm



_____ mm



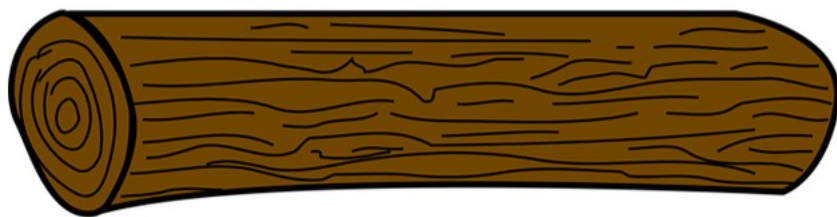
_____ mm



_____ mm



_____ mm



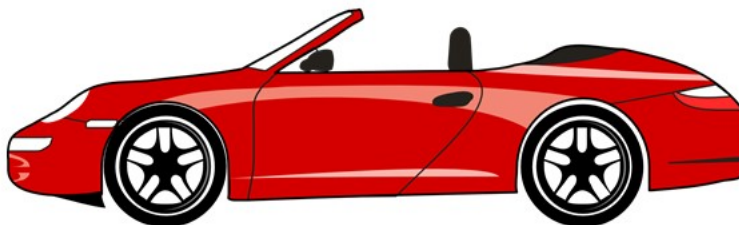
_____ mm



_____ mm



_____ mm



_____ mm

Name: _____

6

Curriculum Connection
SS.2

Measuring Lollipops

Questions

Measure the lengths of the lollipop sticks



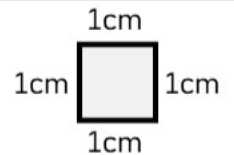
1. Colour the biggest stick Red
2. Colour the shortest stick Blue
3. Colour the two sticks that have the same length Green

Name: _____

7

Measuring Square Side Lengths

A square has 4 sides that are all the same length. We can find out if a shape is a square by measuring the side lengths.



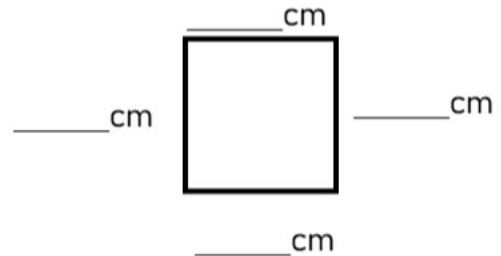
Part 1

Use a ruler to measure the squares below

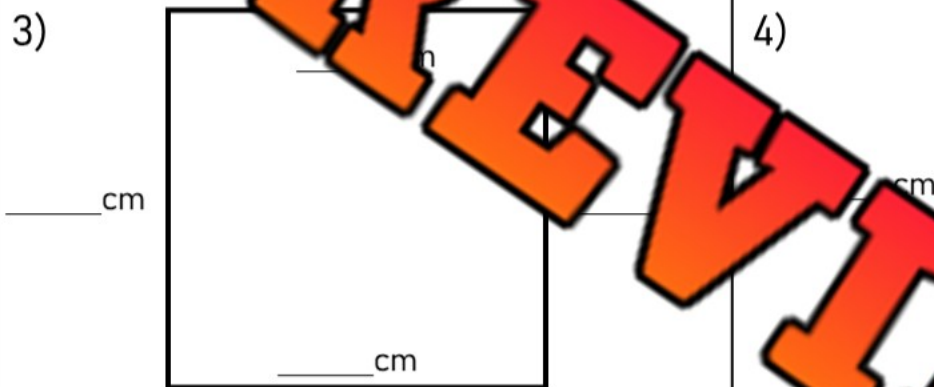
1)



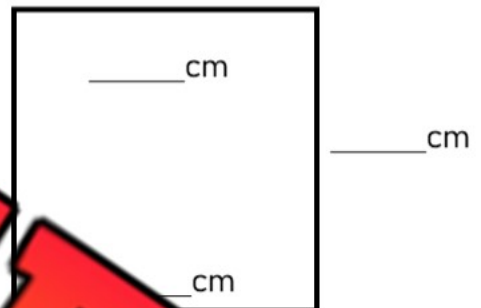
2)



3)



4)



Part 2

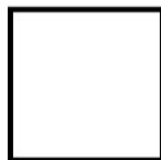
Are the shapes squares or rectangles?

1)



Square Rectangle

2)



Square Rectangle

2)



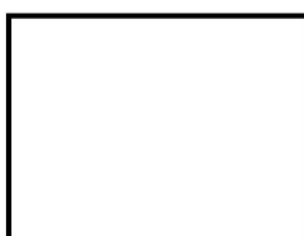
Square Rectangle

3)



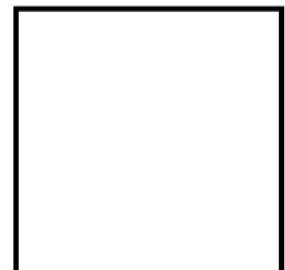
Square Rectangle

4)



Square Rectangle

4)



Square Rectangle

Name: _____

8

Curriculum Connection
SS.2

Metric System Units - mm, cm, m

Millimetre (mm)	Centimetre (cm)	Metre (m)
Used to measure short distances 	Used to measure short to medium distances 	Used to measure medium to long distances 

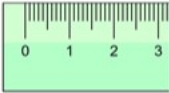
Questions: Which unit of measure would you use to measure the following distances?

1) The length of a piece of paper 	
2) The length of your hand 	
3) The length of your eraser 	
4) The length of your classroom 	
5) The width of a worm 	
6) The distance of a 10 second race 	
7) The length of your shoe 	
8) The width your fingernail 	
9) The height of the classroom door 	
10) The length of your school 	

Name: _____

9

Metric System Units - mm, cm, m

Millimetre (mm)	Centimetre (cm)	Metre (m)
$10\text{mm} = 1\text{cm}$ $1000\text{mm} = 1\text{m}$	$1\text{cm} = 10\text{mm}$ $100\text{cm} = 1\text{m}$	$1\text{m} = 100\text{cm}$ $1\text{m} = 1000\text{mm}$
		

Part 1 Fill in the tables below

	cm
10	1
20	
40	
50	
	6
	7
	8
90	
100	

cm	m
100	1
	2
300	3
400	
	5
600	
	7
1000	

Part 2 Convert the units of measurement below

1) 1m _____cm

5) 5m _____cm

9) 500cm _____m

2) 20mm _____cm

6) 50mm _____cm

10) 500mm _____cm

3) 2cm _____mm

7) 100mm _____cm

11) 8m _____cm

4) 50cm _____mm

8) 30cm _____mm

12) 300cm _____m

Name: _____

11

Curriculum Connection
SS.2

Which is Longer?

Part 1

Which distance is farther? Circle the longest distance.

1)	10.5m	200.2cm	10.5mm	2.5m
2)	32.5cm	380mm	0.5m	1000m
3)	50m	535cm	5.5m	1.5m
4)	3.3m	1000mm	156cm	
5)	712cm	8m	3000mm	4.5m

Part 2

Read the problems and solve them below

- Nick and Ryan both competed in a long jump track meet. Nick jumped 3.45m and Ryan jumped 329cm. Who jumped farther?
- Max and Rudy are arguing over whose pencil is longer. Max's pencil is 10cm long and Rudy's is 95mm long. Whose pencil is longer?
- Fred and Norm both walk to school. Fred walks 5400cm and Norm walks 53m. Who walks further to school?



Name: _____

15

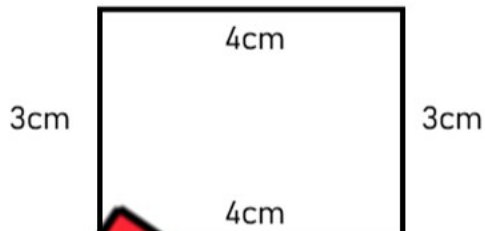
Curriculum Connection
SS.1

Finding the Perimeter of Rectangles

Part 1

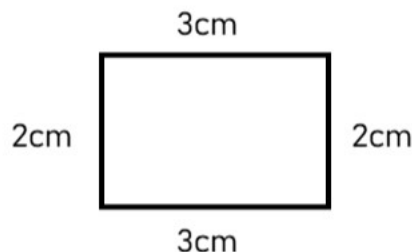
Find the perimeter of the rectangles below

1)



Perimeter= _____

2)



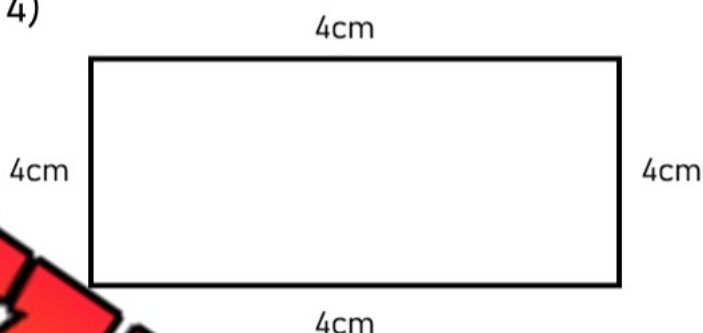
Perimeter= _____

3)



Perimeter= _____

4)



Perimeter= _____

Part 2

Answer the word problems below

1) A rectangular basement has a length of 15m and a width of 7m. What is the perimeter of the basement?



2) The perimeter of a rectangular playground is 40m. If the length of the playground is 15m, what is the width?



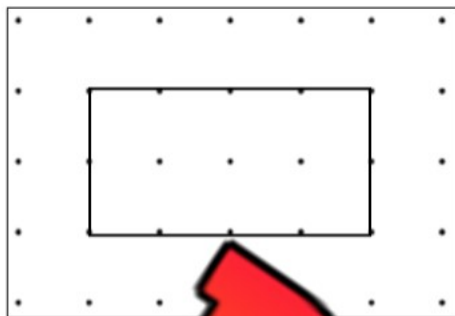
3) The basketball court has a width of 12 metres and a perimeter of 72 metres. What is the length of the basketball court?



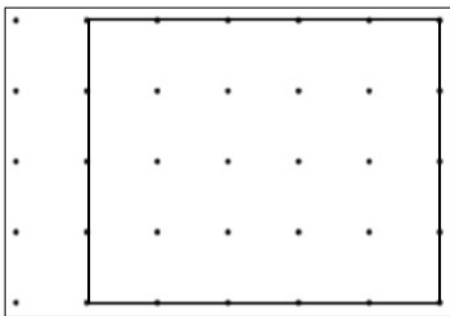
Finding the Perimeter of Irregular Shapes

Part 1

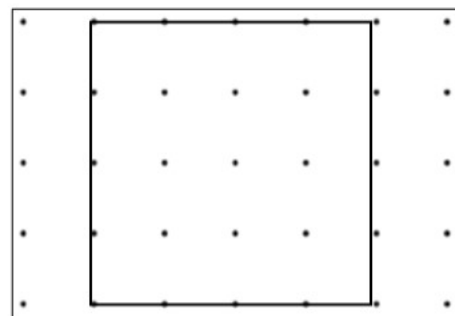
Find the perimeter of the rectangles below



1) Perimeter=_____



2) Perimeter=_____



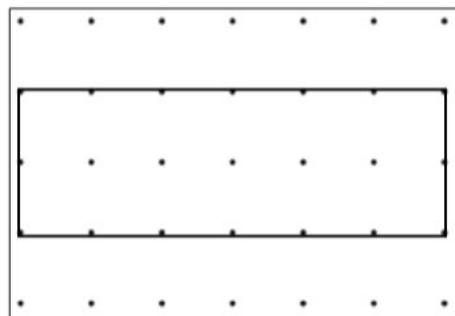
3) Perimeter=_____



4) Perimeter=_____



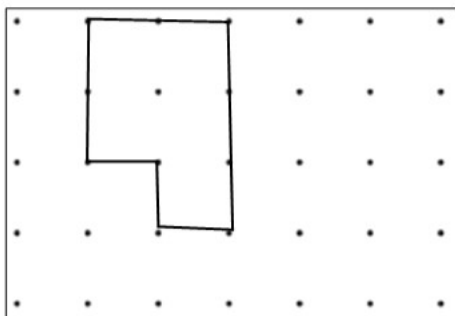
5) Perimeter=_____



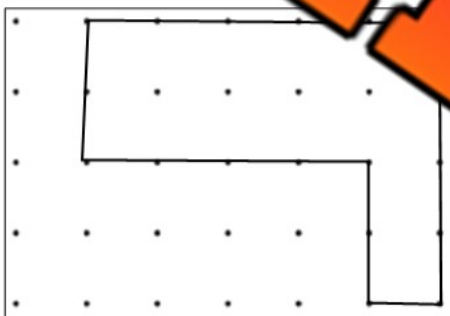
6) Perimeter=_____

Part 2

Find the perimeter of the polygons below



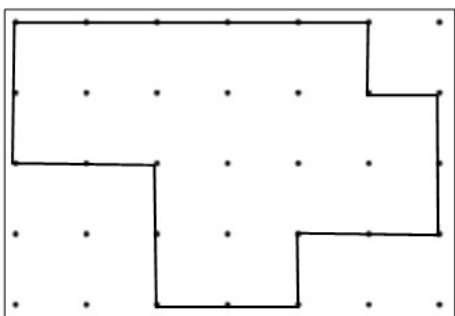
1) Perimeter=_____



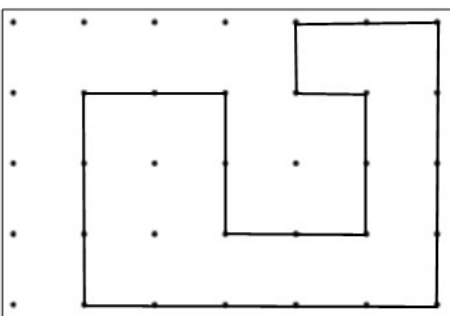
2) Perimeter=_____



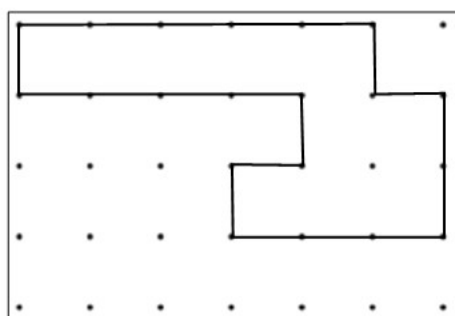
3) Perimeter=_____



4) Perimeter=_____



5) Perimeter=_____



6) Perimeter=_____

Name: _____

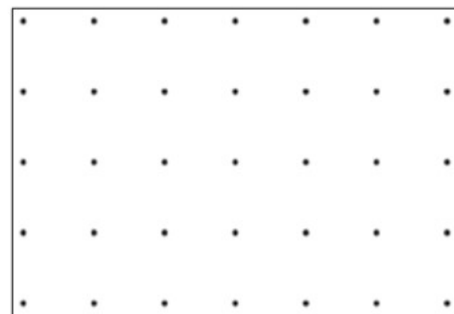
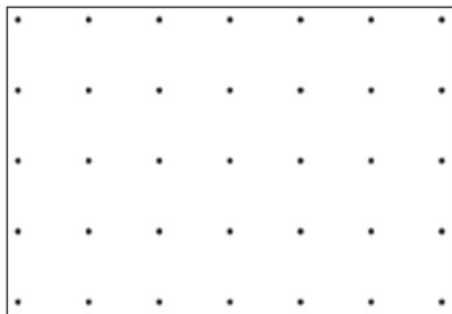
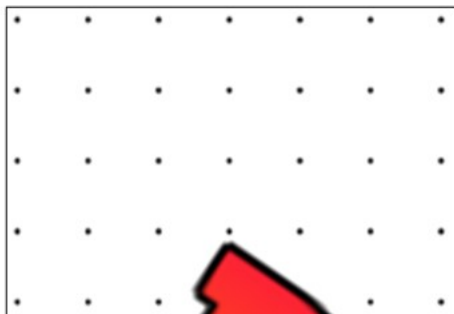
17

Curriculum Connection
SS.1

Drawing Shapes Using Perimeter

Part 1

Draw a **square** with the perimeter that is given to you



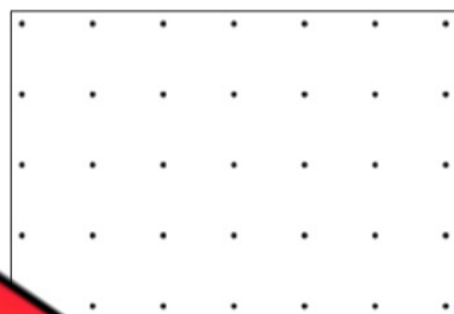
1) Perimeter = 8

2) Perimeter = 4

3) Perimeter = 12

Part 2

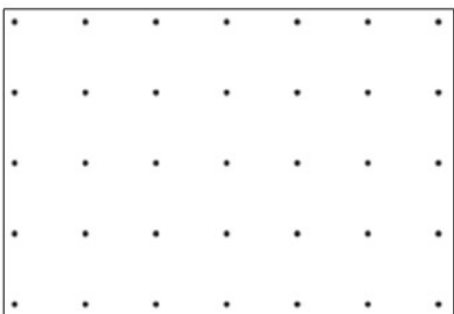
Draw a **rectangle** with the perimeter that is given to you



4) Perimeter = 6

5) Perimeter = 10

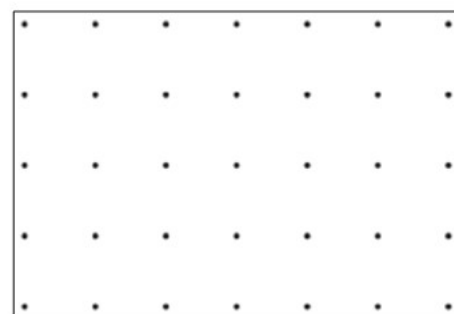
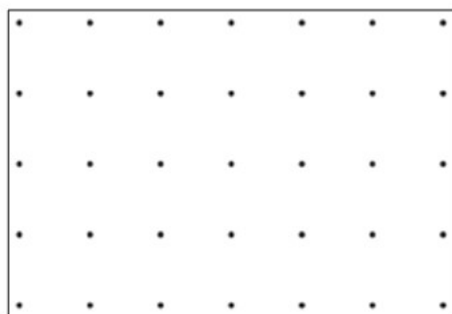
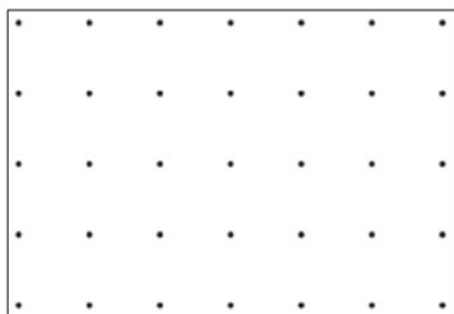
6) Perimeter = 16



7) Perimeter = 8

8) Perimeter = 14

9) Perimeter = 18



10) Perimeter = 20

11) Perimeter = 12

12) Perimeter = 22

Finding Perimeter - Converting cm and mm

Questions

Step 1 - Convert the units so they are all the same
Step 2 - Add up all the units

*** not to scale

1)

3cm

40mm

Perimeter = _____ cm _____ mm

2)

3cm

20mm

Perimeter = _____ cm _____ mm

3)

6cm

Perimeter = _____ cm _____ mm

4)

7cm

30mm

Perimeter = _____ cm _____ mm

5)

50mm

2cm

Perimeter = _____ cm _____ mm

40mm

Perimeter = _____ cm _____ mm

7)

90mm

5cm

Perimeter = _____ cm _____ mm

8)

40mm

Perimeter = _____ cm _____ mm

9)

2cm

100mm

Perimeter = _____ cm _____ mm

10)

3cm

50mm

Perimeter = _____ cm _____ mm

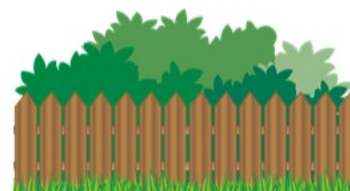
Perimeter Word Problems

Questions

Draw a picture of the problem and then find the perimeter

1) A computer screen is 22cm by 12cm. What is the perimeter of the screen?

2) Pam wants to fence around his yard. His yard is 25m by 12m. What is the perimeter of his yard?



3) The school yard is a rectangle 175m by 32m. What is the perimeter of the yard?

4) A poster is 1.2m by 160cm. What is the perimeter of



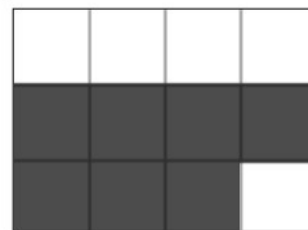
5) Mrs. Wilson is putting a border around her bulletin board. The board is 320cm by 1.6m. What is the perimeter of the bulletin board?



Introduction to Area

Area is the amount of surface or space inside a two-dimensional region.

Example - The area of the shape is 7 squares.



Questions

What is the area of the shape in squares?

1)



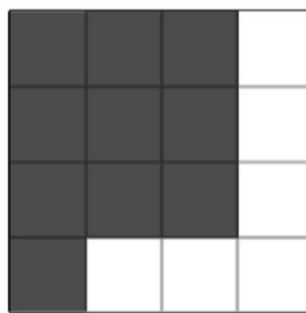
_____ squares

2)



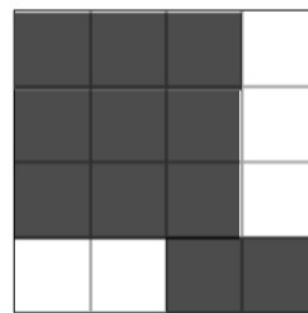
_____ squares

3)



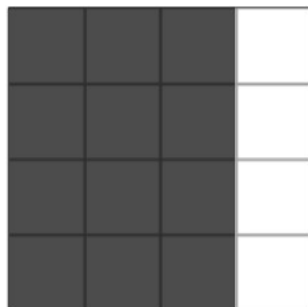
_____ squares

4)



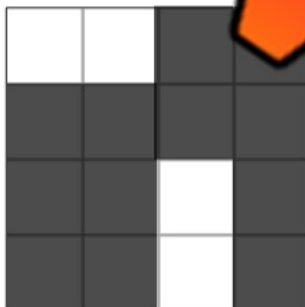
_____ squares

5)



_____ squares

6)



_____ squares

7)



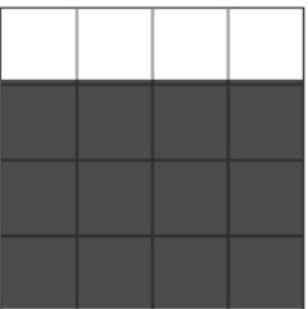
_____ squares

8)



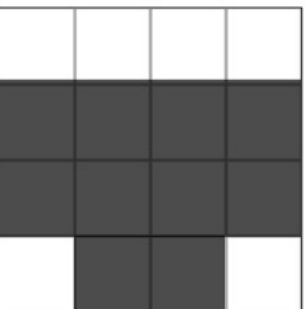
_____ squares

9)



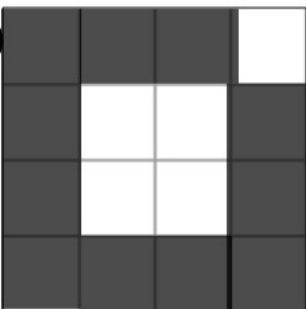
_____ squares

10)



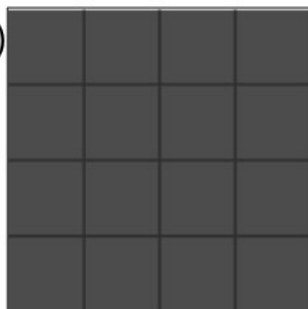
_____ squares

11)



_____ squares

12)



_____ squares

Name: _____

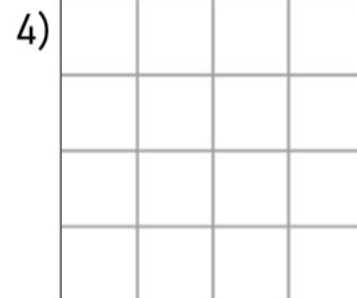
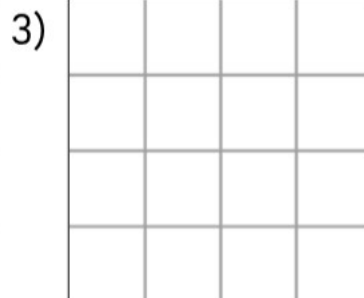
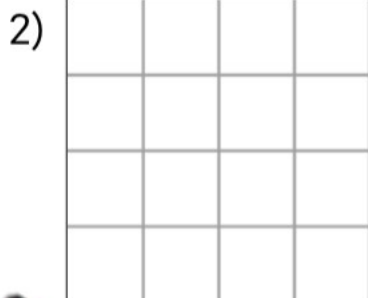
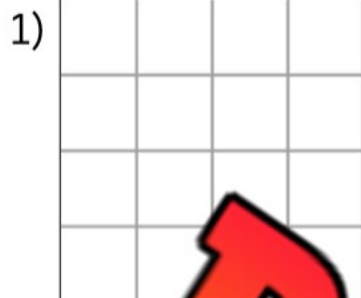
23

Curriculum Connection
SS.1

Introduction to Area

Questions

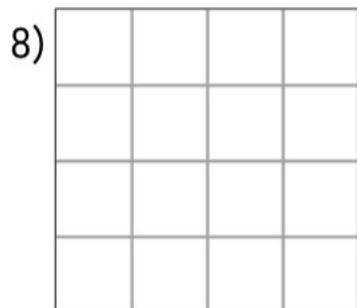
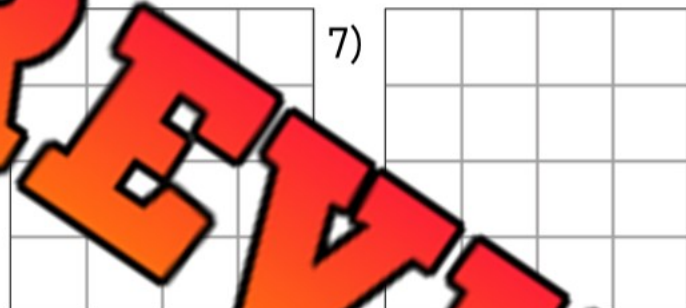
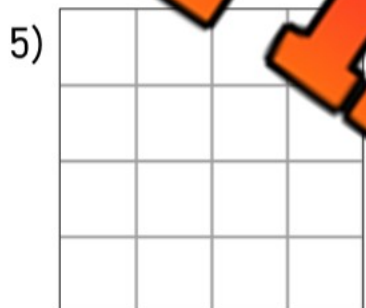
Shade in the area



10 squares

7 squares

9 squares

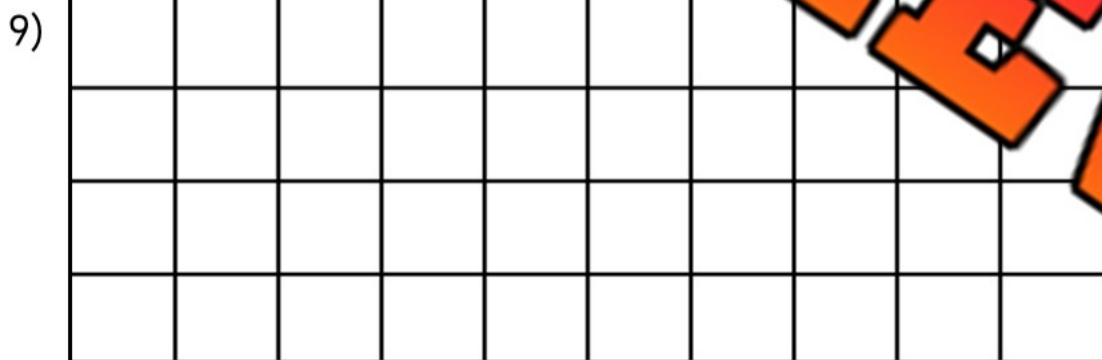


14 squares

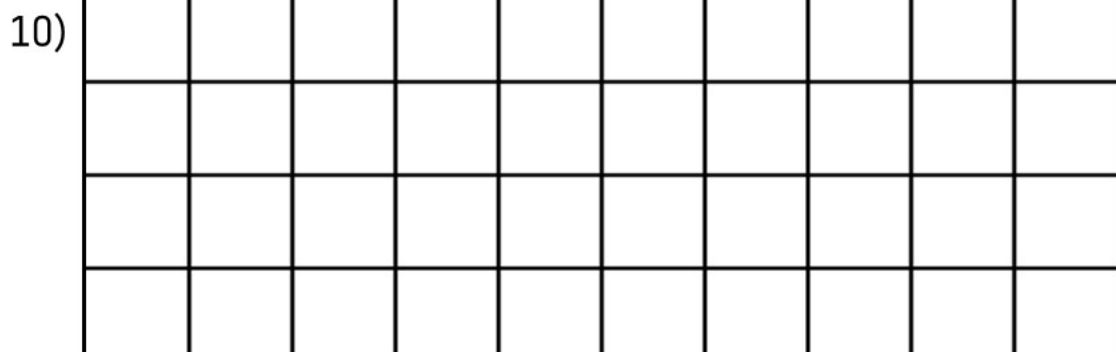
12 squares

squares

16 squares



squares

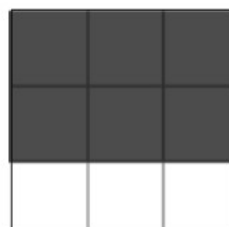


36 squares

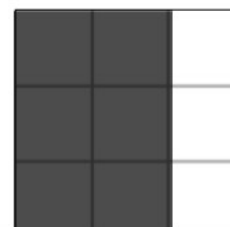
PREVIEW

Comparing Areas

The area of two shapes can be the same, but they may look different. The two shapes just need to take up the same amount of space.



Area = 6 Squares



Area = 6 Squares

Question Draw a shape that has the same area but looks different

1)

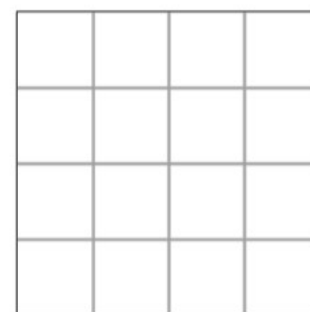


_____ squares

2)

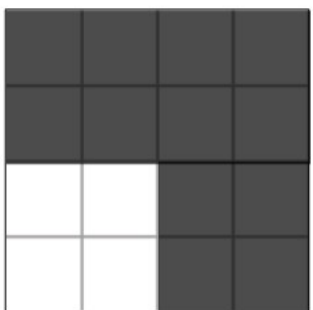


_____ squares

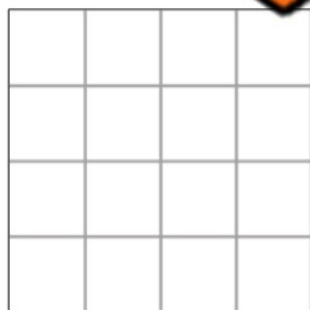


_____ squares

3)



_____ squares



_____ squares

4)

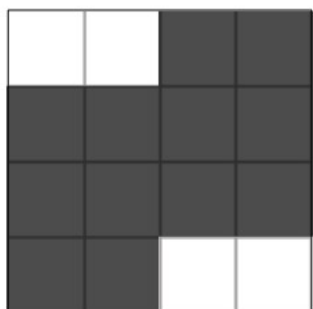


_____ squares

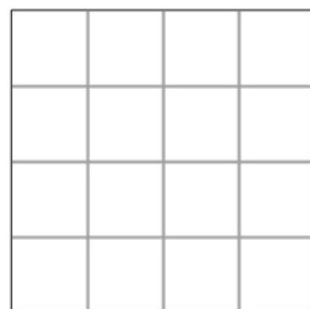


_____ squares

5)

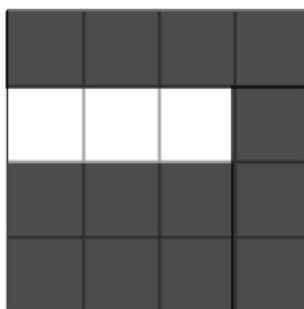


_____ squares

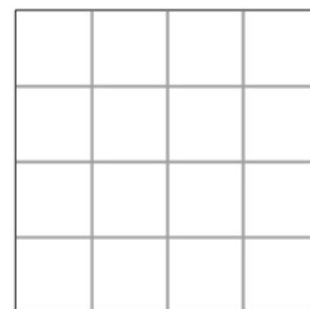


_____ squares

6)



_____ squares

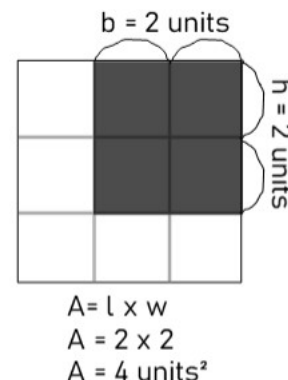
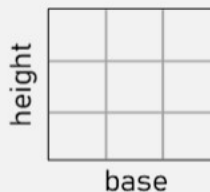


_____ squares

Area - Units Squared

When we calculate the area of a shape, we can use the following formula

$$A = \text{base (b)} \times \text{height (h)}$$



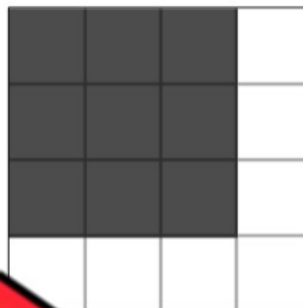
Question

Find the area of the shapes below

1)



2)

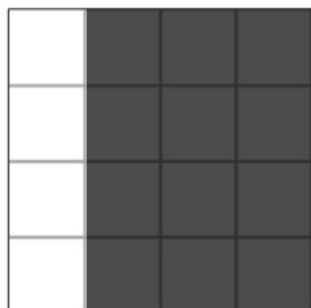


$$A = b \times h$$

$$A = _ \times _$$

$$A = _ \text{ units}^2$$

3)



$$A = b \times h$$

$$A = _ \times _$$

$$A = _ \text{ units}^2$$

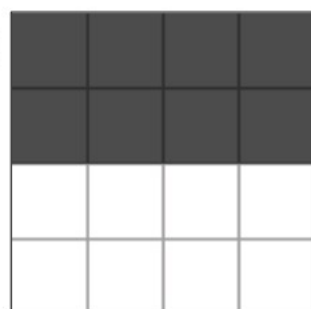


$$A = b \times h$$

$$A = _ \times _$$

$$A = _ \text{ units}^2$$

5)



$$A = b \times h$$

$$A = _ \times _$$

$$A = _ \text{ units}^2$$

6)



$$A = b \times h$$

$$A = _ \times _$$

$$A = _ \text{ units}^2$$

7)



$$A = b \times h$$

$$A = _ \times _$$

$$A = _ \text{ units}^2$$

Name: _____

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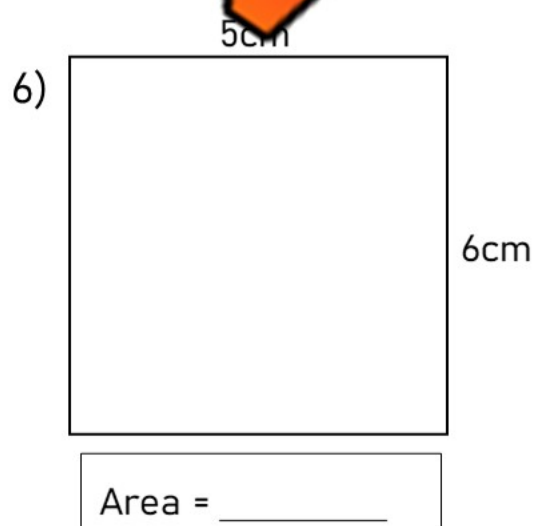
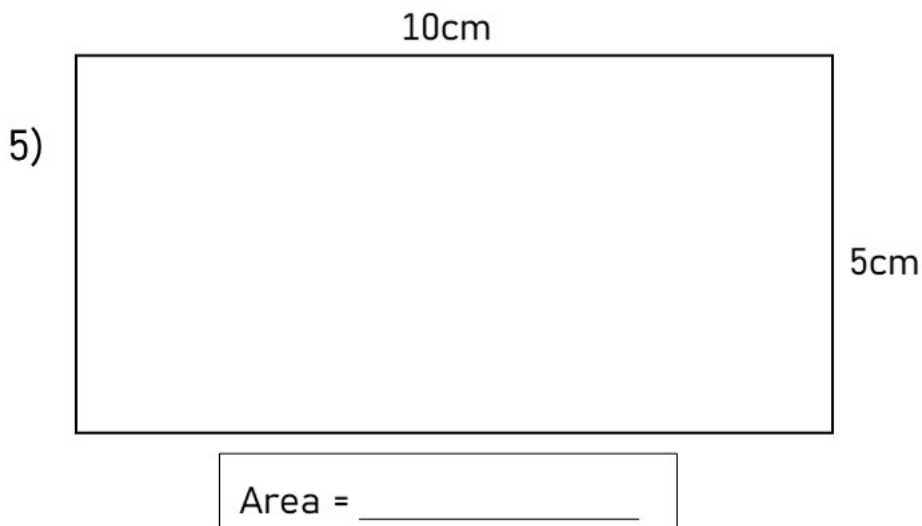
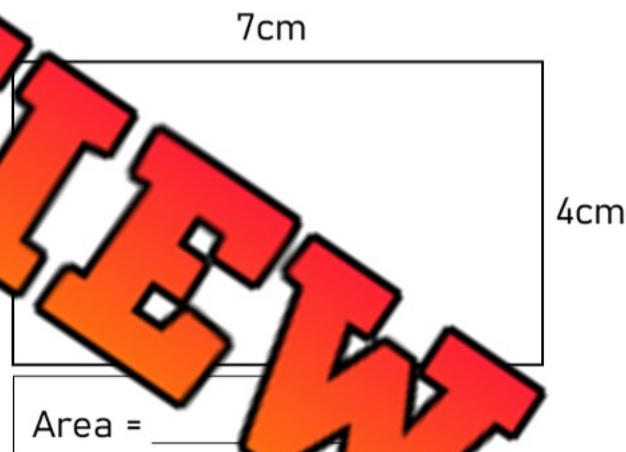
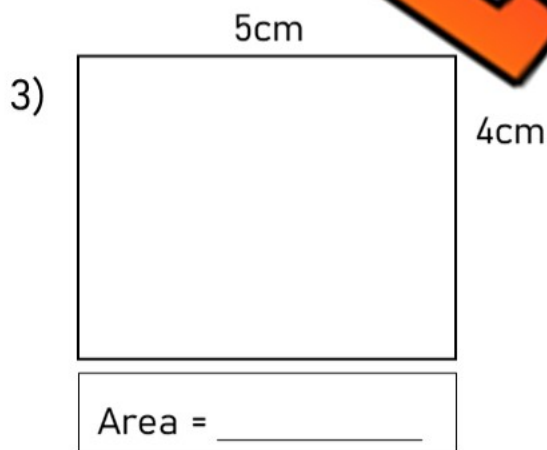
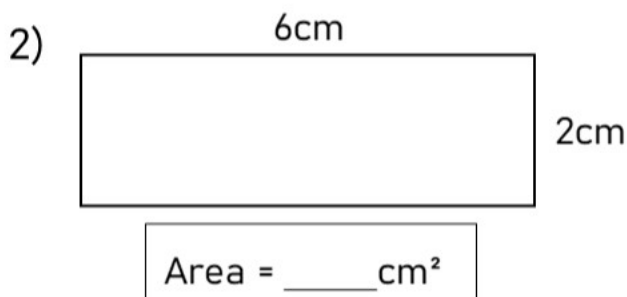
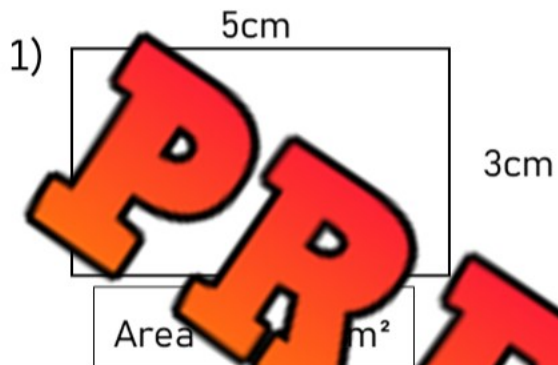
Curriculum Connection
SS.1

Calculating Area Using CM

We can draw lines on shapes to segment them into cm squares. Try your best to make the squares equal.



Questions Draw lines in the shapes below to create cm squares. Then count the squares



Name: _____

29

Curriculum Connection
SS.1

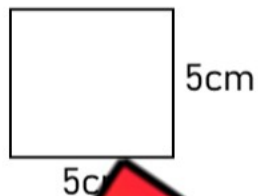
Finding the Area of Rectangles

Questions

Find the area ($A = b \times h$)

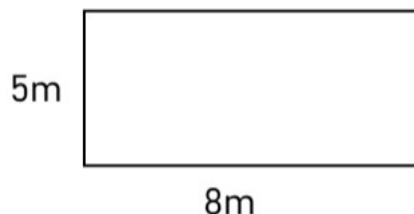
*Not to Scale

1)



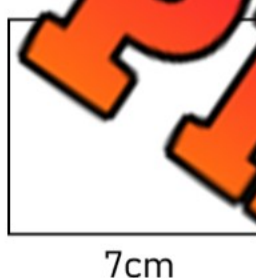
Area = _____

2)



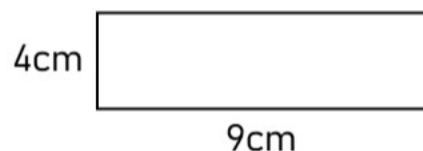
Area = _____

3)



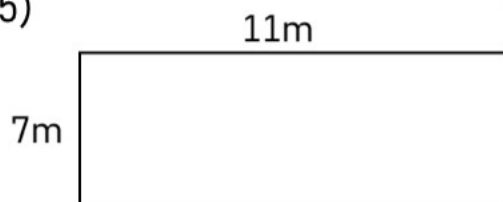
Area = _____

4)



Area = _____

5)



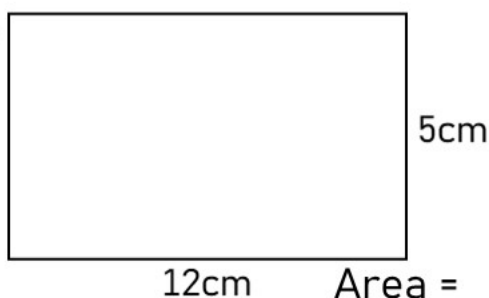
Area = _____

6)



Area = _____

7)



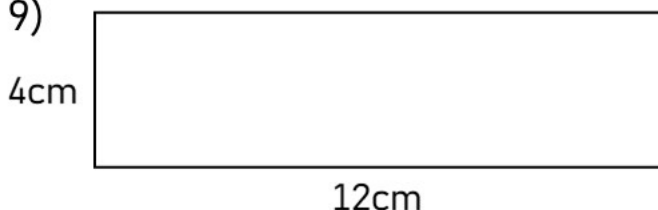
Area = _____

8)



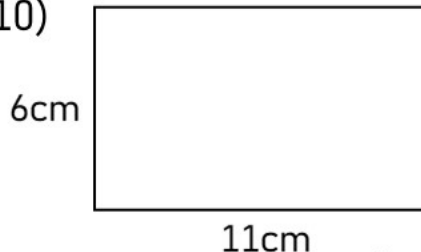
Area = _____

9)



Area = _____

10)



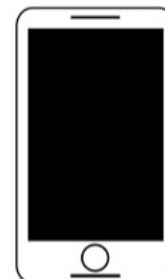
Area = _____

Area Word Problems

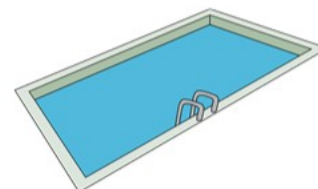
Questions

Draw a picture of the problem and then find the area

1) A phone is 12cm by 6cm. What is the area of the phone?



2) A pool is 10m by 5m. What is the area of the pool?



4) A candy wrapper is 4cm wide and 3cm high. What is the area of the wrapper?



4) The front of a square box is 12cm wide. What is the area of the box?



5) A door is 2m by 100cm. What is the area of the door?

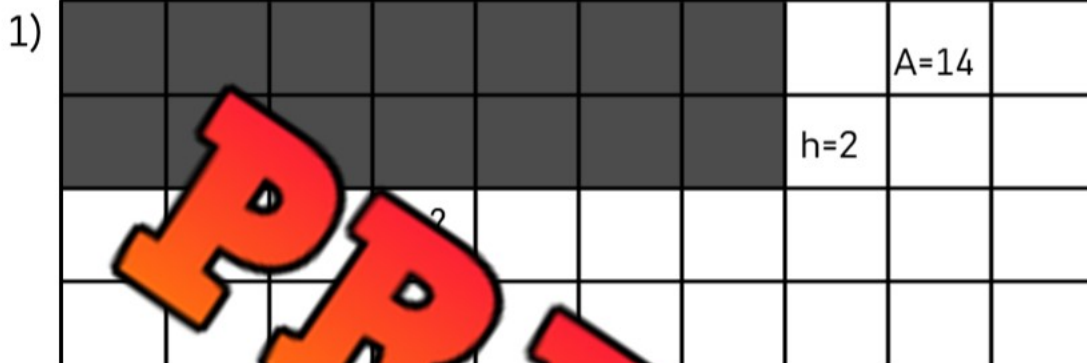


Finding the Missing Information - Visuals

To find the area of a rectangle, we need 2 of 3 pieces of information – base, height, and area. With the base and the height, we can find the area. With the area and the base, we can find the height and with the area and height, we can find the base.

Questions

Find the missing piece of information



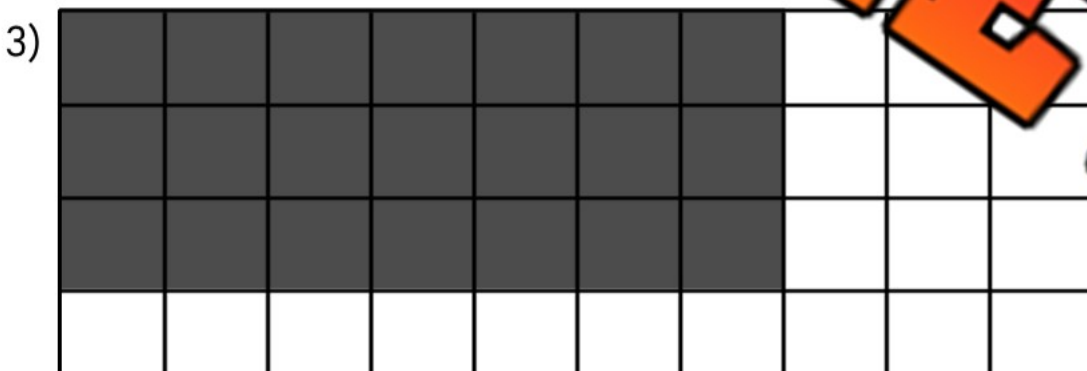
$$A = b \times h$$

$$14 = \underline{\quad} \times 2$$

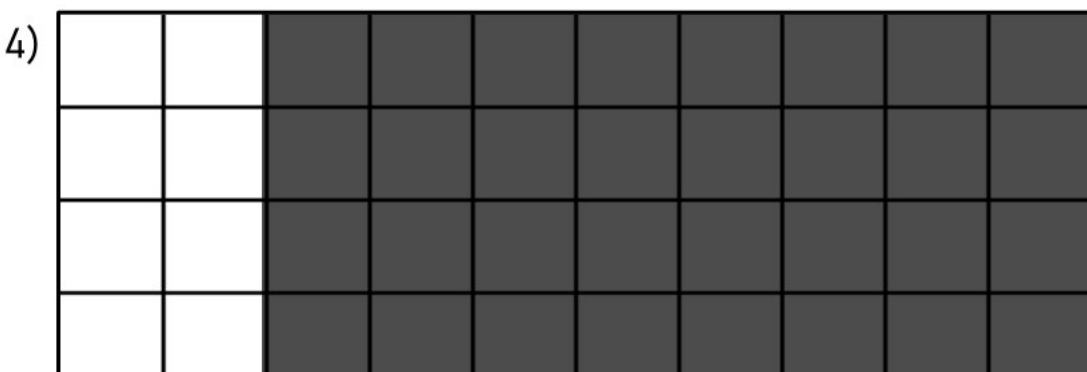


$$A = b \times h$$

$$36 = 9 \times \underline{\quad}$$



$$21 = \underline{\quad} \times 3$$



$$A = b \times h$$

$$32 = 8 \times \underline{\quad}$$

Name: _____

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Curriculum Connection
SS.1

Perimeter and Area

Questions

Step 1 - Find the perimeter (add up all the sides)

Step 2 - Find the area ($A = b \times h$)

1)

6m



3m

Perimeter: _____

Area: _____

2)

7m



4m

Perimeter: _____m

Area: _____ m²

3)



Perimeter: _____

Area: _____

4)

10m



Perimeter: _____

Area: _____

5)

8m



6m

Perimeter: _____

Area: _____

6)

9m



5m

Perimeter: _____

Area: _____

Name: _____

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Curriculum Connection
SS.1**Calculating Area and Perimeter - House****Questions**

Calculate the area and perimeter of each room in the house.

Room	Perimeter	Area
Garage		
Front Porch		
Living Room		
Entrance		
Hallway		
Dining Room		
Kitchen		
Balcony		

Room	Perimeter	Area
Back Deck		
Bathroom 1		
Bathroom 2		
Bathroom 3		
Bedroom 1		
Bedroom 2		
Bedroom 3		

Name: _____

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Curriculum Connection
SS.1

Same Area - Different Perimeter

Questions

Is it possible for a shape to have the same area and a different perimeter?

1)

8m



2m

Perimeter: _____

Area: _____

2)

4m



4m

Perimeter: _____m

Area: _____m²

3)

16m

1m

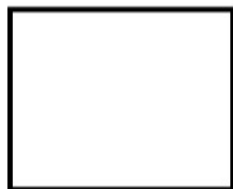


Perimeter: _____m

Area: _____m²

4)

6cm



4cm

Perimeter: _____cm

Area: _____cm²

5)

3cm



Perimeter: _____cm

Area: _____cm²

6)

24cm

1cm

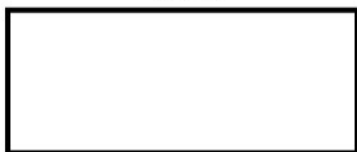


Perimeter: _____cm

Area: _____cm²

7)

12m



3m

Perimeter: _____m

Area: _____m²

8)

6m



6m

Perimeter: _____m

Area: _____m²

9)

18m

2m



Perimeter: _____m

Area: _____m²

Perimeter and Area - Room Size



Questions

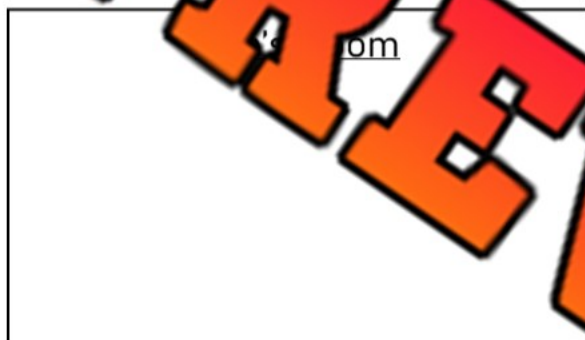
Answer the word problems below

Ben and Brayden are arguing over who's room is larger. Both of their rooms are rectangular. Ben's room has a perimeter of 14 metres and Brayden's room has a perimeter of 18 metres.

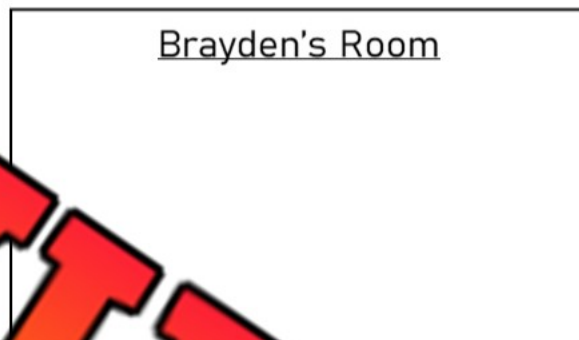
1) Whose room is larger? Explain why you think that?

2) Draw Ben's room and Brayden's room below. Label them with the dimensions (length and width in metres).

_____ room

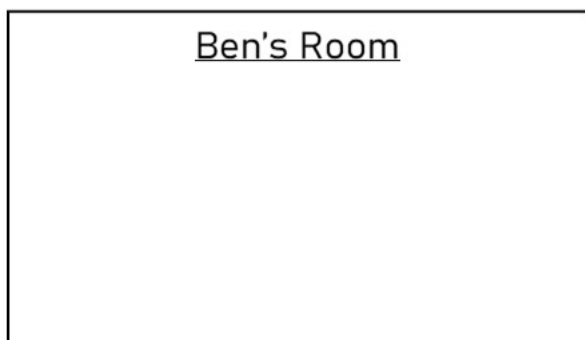


Brayden's Room

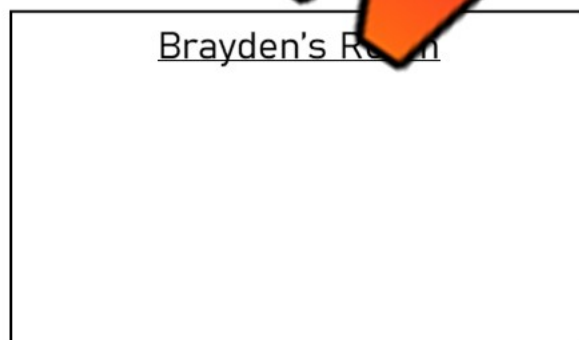


- 3) a) What is the area of Ben's room? _____
b) What is the area of Brayden's room? _____
- 4) Could Brayden and Ben have different shaped rooms? Draw them again.

Ben's Room



Brayden's Room



- 5) a) What is the area of this version of Ben's room? _____
b) What is the area of this version of Brayden's room? _____

Calculating Area and Perimeter - Gym

Questions

Answer the word problems below



Roger is building a gym. His walls can have a perimeter of 44 metres. He wants the largest area possible for his gym.

- 1) Draw the gym below. Label the walls with the dimensions (measurements in metres).

- 2) What is the area of the gym?

- 3) What is the perimeter of the gym?

- 4) What shape is the gym? Why does this shape give the largest area?

- 5) What perimeter of the gym would provide the smallest area? Draw the gym and label the walls with the new dimensions.

PREVIEW

Measuring Volume - CM Cubed and M Cubed

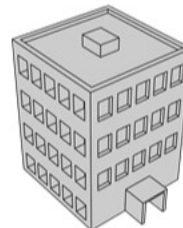
Centimetre Cubed (cm^3)

Used to measure the volume of smaller objects



Metre Cubed (m^3)

Used to measure volume of larger objects



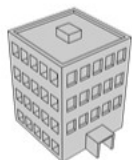
Part 1 Use the information above to decide which unit you would use to measure

1) House	6) Juice box	
2) Pool	7) Recycling bin	
3) Lunch box	8) Sports container	
4) Living room	9) Box of books	
5) Classroom	10) Clothing Drawer	

Part 2 Write something that you would measure using the unit of measurement

1) cm^3		5) cm^3	
2) m^3		6) m^3	
3) cm^3		7) cm^3	
4) m^3		8) m^3	

Estimating Volume Using Referents

Centimetre Cubed (cm ³)	Metre Cubed (m ³)
Rubik's Cube = 216cm ³ 	3 Story Building = 2000m ³ 

Question

Circle which volume matches the description

1) Juice

- a) 30cm³
b) 10cm³
c) 300m³



2) Train car

- a) 20cm³
b) 1000m³
c) 20m³



3) Recycling bin

- a) 42000cm³
b) 200cm³
c) 750m³



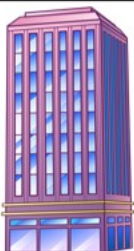
4) School

- a) 20cm³
b) 2000m³
c) 20m³



5) Skyscraper

- a) 2500cm³
b) 250,000m³
c) 1000m³



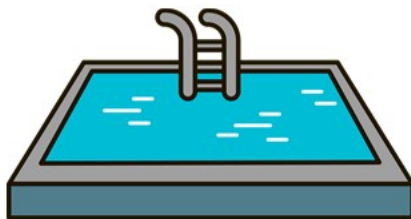
6) Pen

- a) 750cm³
b) 50cm³
c) 1000m³



7) Pool

- a) 80cm³
b) 80m³
c) 1000m³



8) Shoe box

- a) 3000m³
b) 3000cm³
c) 1000m³



9) House

- a) 750m³
b) 750cm³
c) 2000m³



10) Candy Box

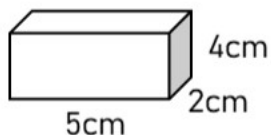
- a) 320cm³
b) 2000cm³
c) 300m³



Calculating Volume - Blocks

Rectangular Prism - Calculating Volume

To find the volume of a rectangular prism, multiply the length by the width by the height.



$$\begin{aligned}v &= l \times w \times h \\v &= 5\text{cm} \times 2\text{cm} \times 4\text{cm} \\v &= 40\text{cm}^3\end{aligned}$$

Questions

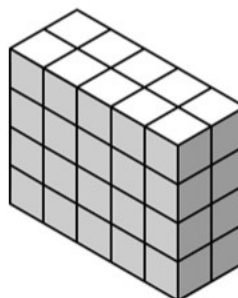
Label the rectangular prisms and then calculate the volume

1)



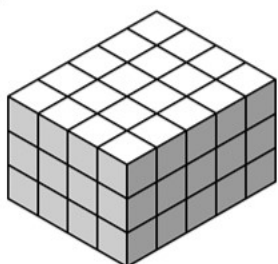
$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

2)



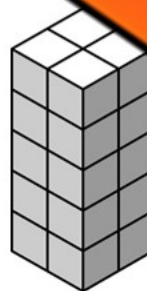
$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

3)



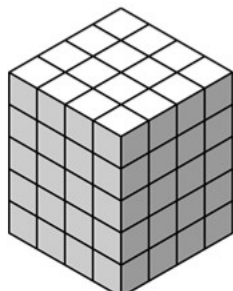
$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

6)



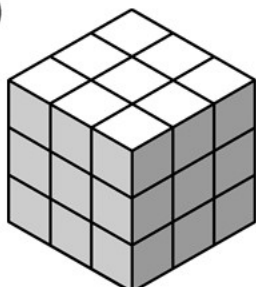
$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

5)



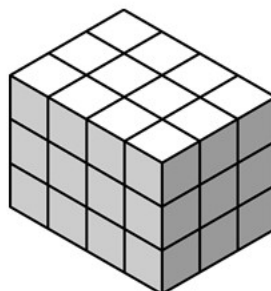
$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

7)



$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

8)



$l =$ _____
 $w =$ _____
 $h =$ _____
 $v =$ _____

Calculating Volume of Rectangular Prisms

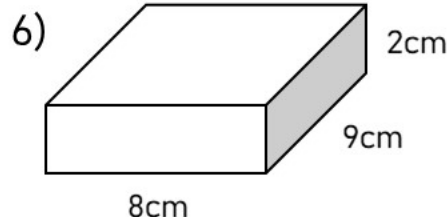
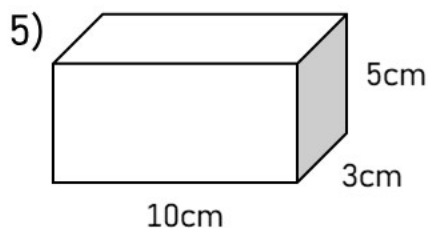
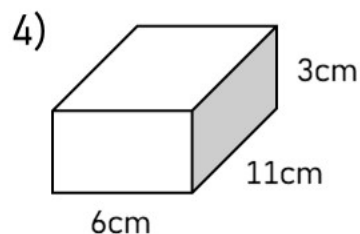
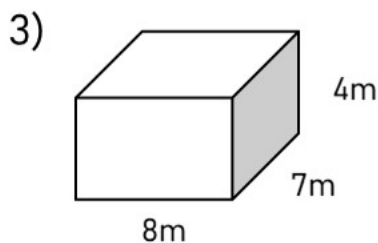
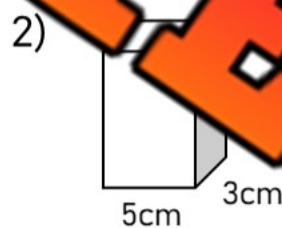
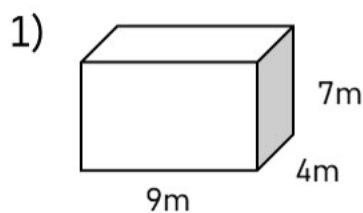
Part 1

A variety of small boxes are used for packaging. Find the volume of each box

Box Type	Length	Width	Height	Volume
Box 1	10cm	8cm	2cm	
Box 2	6cm	7cm	10cm	
Box 3	7cm	9cm	2cm	
Box 4	4cm	8cm	5cm	
Box 5	5cm	9cm	7cm	
Box 6	6cm	8cm	7cm	
Box 7	9cm	7cm	3cm	

Part 2

Calculate the volume of the rectangular prisms

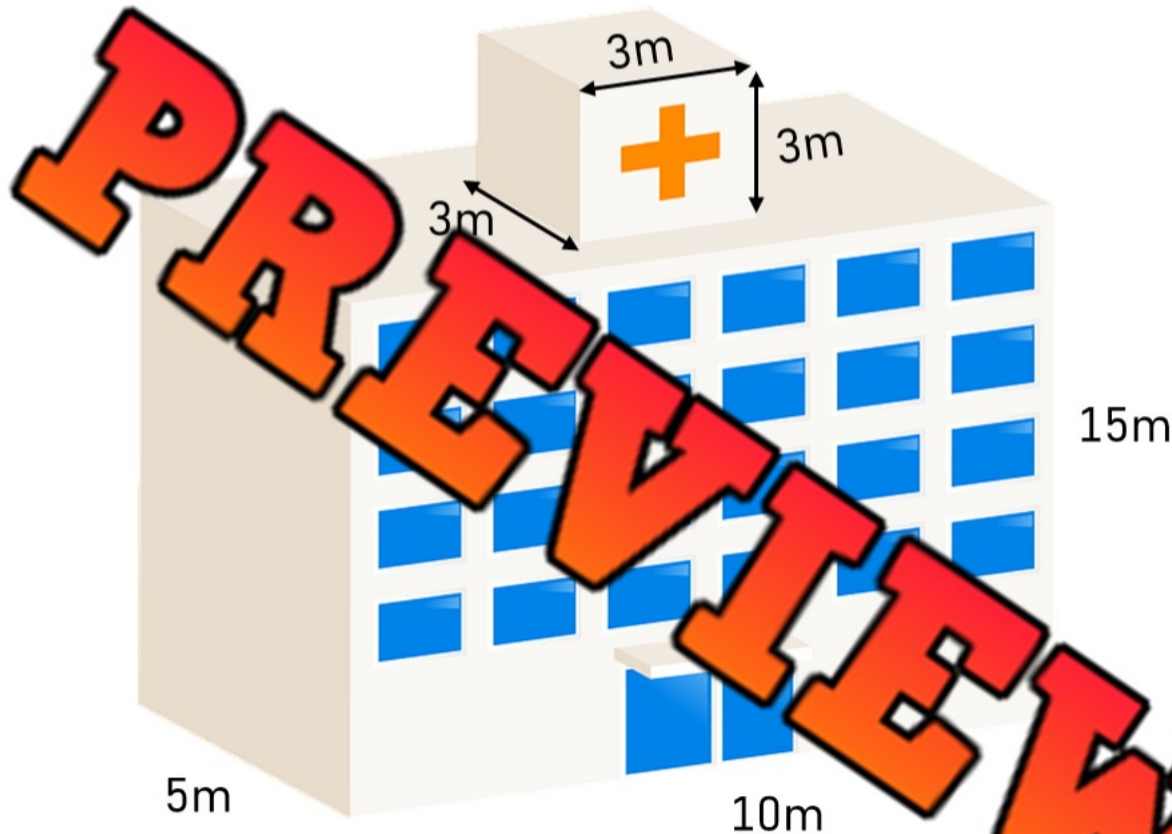


Volume - Word Problem

Questions

Solve the word problem below

The hospital below is made of 2 rectangular prisms. Calculate the volume of both rectangular prisms and add your answers together to find the total volume.



Volume of large part of the hospital = _____ x _____ x _____ = _____

Volume of structure on top of the hospital = _____ x _____ x _____ = _____

Total volume of the hospital = _____ + _____ = _____

Volume - Word Problems

Questions

Solve the word problems below

- 1) Howard can build a box that has a volume of 36m^3 . Draw the box and label the dimensions of the box.



- 2) Ned needs a box that has a volume of 400cm^3 . Draw the box and label the dimensions of the box below.



- 3) Kennedy has started building a box. The length is 10cm and the height is 7cm . The volume of the box needs to be 140cm^3 . What does the width need to be?



- 4) Alexa is measuring the volume of a cereal box. She's figured out that the height is 40cm and the width is 8cm . The volume is $4,800\text{cm}^3$. What is the length of the cereal box?



Measuring Capacity - Millilitre (mL) and Litre (L)

Millilitre (mL)	Litre (L)
Used to measure capacity of small containers	Used to measure capacity of mid to large sized containers
	

Part 1 Use the information above to decide which unit you would use to measure

1) Cup of apple juice	6) Wheelbarrow of liquid	
2) Dump truck of cement	7) Juice box	
3) Can of pop	8) Water in hot tub	
4) Spoonful of medicine	9) Amount of medicine	
5) Bucket of water	10) Bathtub full of water	

Part 2 Write something that you would measure using the unit of measurement

1) Millilitre		5) Millilitre	
2) Litre		6) Litre	
3) Millilitre		7) Millilitre	
4) Litre		8) Litre	

Metric System Units - Capacity - Decimal Conversions

Millilitre (mL)	Litre (L)
1000 mL = 1L 1800 mL = 1.8L 	1.5L = 1500mL 3.3L = 3300mL 

Part 1 Fill in the tables below

mL	L
1000	1
2000	
3000	
	5
6000	
7000	
8000	
	9
	10

mL	L
1500	
	2.5
	3.5
4500	
5500	
6500	
	7.5
9500	
10500	

Part 2 Convert the units of measurement below

1) 1.7L _____ mL

5) 2100mL _____ L

9) 4.5L _____ mL

2) 5.4L _____ mL

6) 4700mL _____ L

10) 5500mL _____ L

3) 8400mL _____ L

7) 8400mL _____ L

11) 4500mL _____ L

4) 3L _____ mL

8) 7200mL _____ L

12) 2500mL _____ L

Which has the Largest Capacity?

Part 1

Which measurement has the largest capacity?

1)	5.2L	510mL	2300mL	1.9L
2)	10.3L	3500mL	2.1L	1600L
3)	67mL	608L	2300L	3.5L
4)	4500mL	6500L	1.6L	
5)	3600mL	2200mL	3.1L	

Part 2

Read the problems and solve them below

- Henry and Ruby both have juice boxes. Henry's juice box is 231ml and Ruby's is 0.5L. Who's juice box has a larger capacity?
- Jesse is ordering soup from a restaurant. She can choose from a 500mL bowl or a 1100mL soup. Which option should she choose if she wants the larger capacity of soup?
- Traci and Emma are arguing over who's water bottle has the larger capacity. Traci's bottle has a capacity of 2.2L and Emma's bottle holds 1955mL.



Which Capacity is the Largest?

Questions

Circle which capacity is the largest

1) A pool

- a) 30,000L
- b) 1000ml
- c) 50L



2) A cup

- a) 300L
- b) 250mL
- c) 3L



3) A bottle

- a) 1L
- b) 100mL
- c) 5000mL



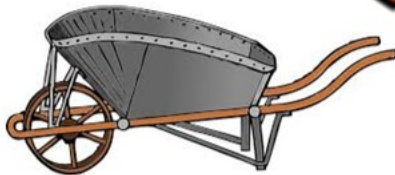
4) A spoon

- a) 10kL
- b) 1L
- c) 500mL
- d) 10mL



5) A wheelbarrow

- a) 100L
- b) 10L
- c) 500mL



6) A bucket

- a) 100L
- b) 10L
- c) 300L



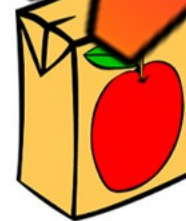
7) A hot tub

- a) 20L
- b) 2000L
- c) 500mL



8) A juice box

- a) 250mL
- b) 1L
- c) 20L



9) A bath tub

- a) 5L
- b) 300L
- c) 500mL

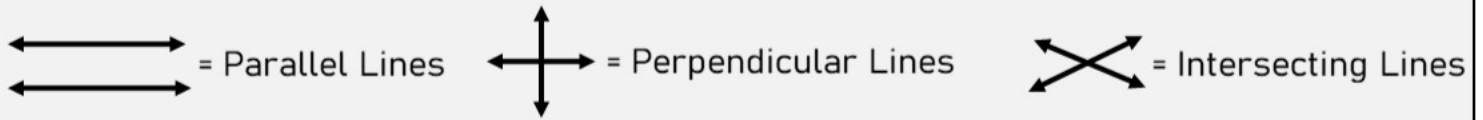


10) A gas tank

- a) 50L
- b) 500mL
- c) 1000mL



Parallel, Perpendicular and Intersecting Lines



Part 1

Label the lines parallel, perpendicular, or intersecting

1)	2)	3)	4)
5)	7)	8)	

Part 2

Draw a second line that is intersecting, perpendicular or parallel to the other line

1)	2)	3)	
Perpendicular	Parallel	Intersecting	Parallel
5)	6)	7)	8)
Intersecting	Perpendicular	Intersecting	Parallel

Quadrilaterals - Trapezoids

A trapezoid has at least one pair of parallel sides



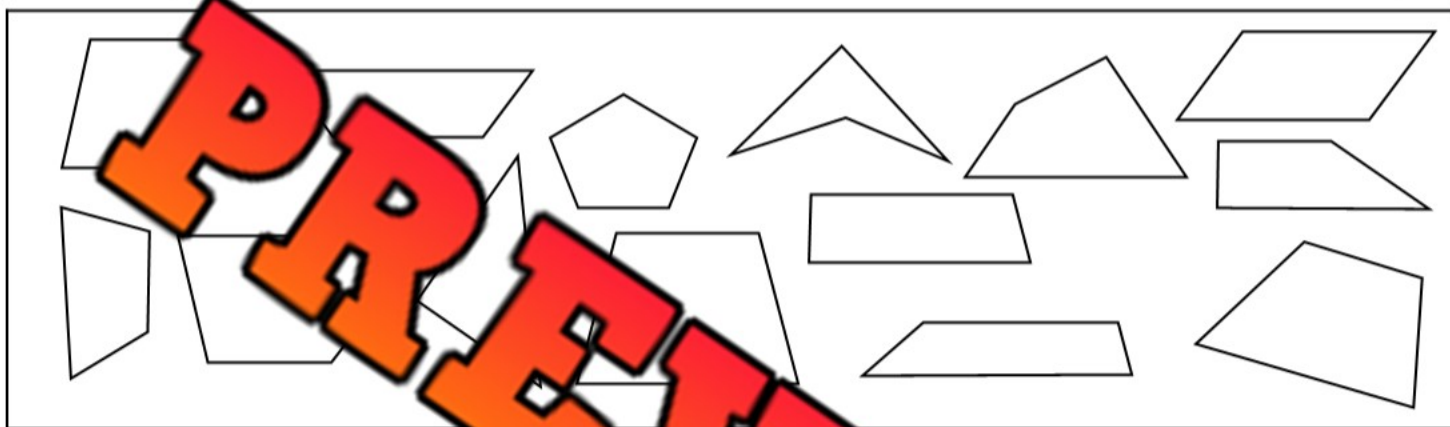
2 pairs of parallel lines



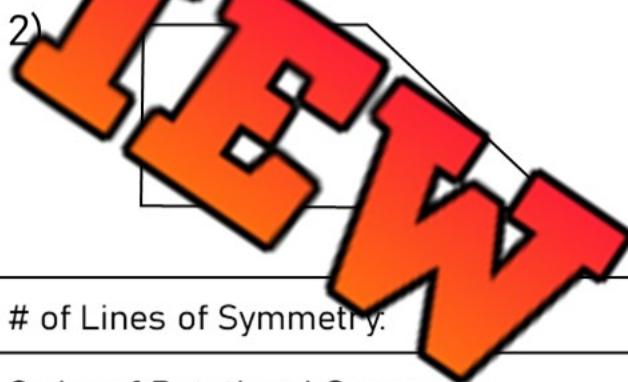
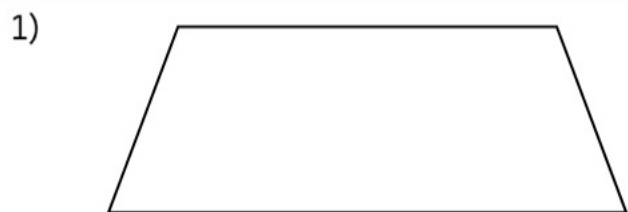
1 pair of parallel lines

This means parallelograms, rectangles, and squares are all considered trapezoids.

Part 1 Colour or circle the trapezoids in the collection of quadrilaterals below



Part 2 Describe the trapezoids below in terms of their symmetric properties



of Lines of Symmetry:

of Lines of Symmetry:

Order of Rotational Symmetry:

Order of Rotational Symmetry:

Intersect at Midpoint? Y N

Intersect at Midpoint? Y N

Intersect at Right Angle? Y N

Intersect at Right Angle? Y N

Diagonals Same Length? Y N

Diagonals Same Length? Y N

of Perpendicular Lines:

of Perpendicular Lines:

of Parallel Lines:

of Parallel Lines:

of Intersecting Lines:

of Intersecting Lines:

Name: _____

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Quadrilaterals - Parallelogram

A parallelogram is a trapezoid with two pairs of parallel sides and congruent opposite sides.

Parallelogram



Rectangle



Rhombus



Square



Part 1

Colour or circle the parallelograms in the collection of quadrilaterals below



Part 2

Describe the parallelogram using their geometric properties

1)



2)



of Lines of Symmetry:

of Lines of Symmetry:

Order of Rotational Symmetry:

Order of Rotational Symmetry:

Intersect at Midpoint? Y N

Intersect at Midpoint? Y N

Intersect at Right Angle? Y N

Intersect at Right Angle? Y N

Diagonals Same Length? Y N

Diagonals Same Length? Y N

of Perpendicular Lines:

of Perpendicular Lines:

of Parallel Lines:

of Parallel Lines:

of Intersecting Lines:

of Intersecting Lines:

Name: _____

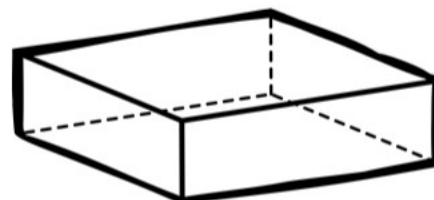
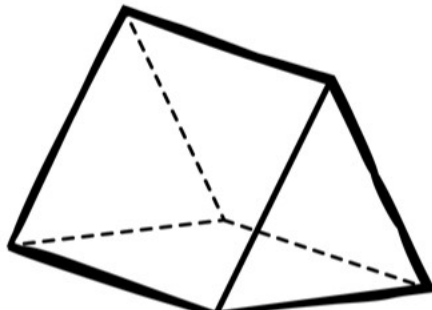
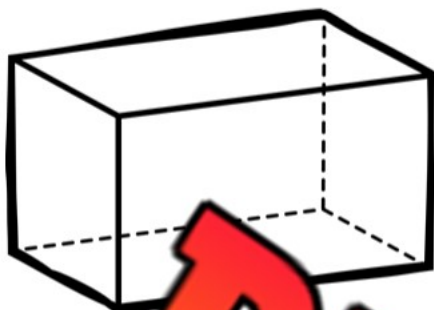
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SS.5

Prisms - Faces, Edges, Vertices

Questions

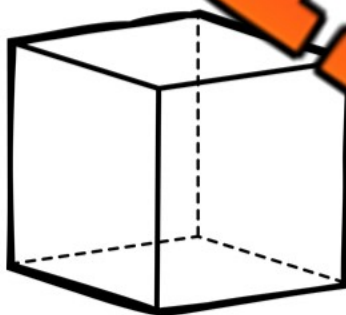
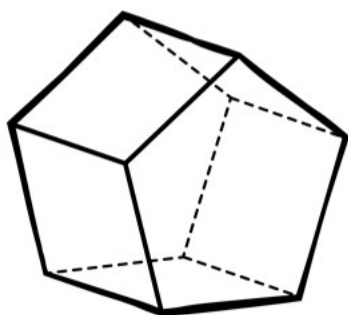
Fill in the tables below based on the prisms



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Name: _____

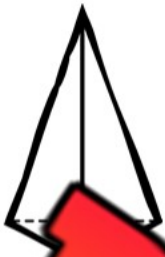
84

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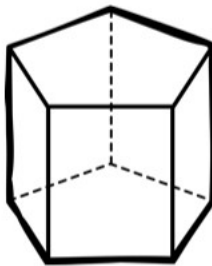
Prism or Pyramid

Questions

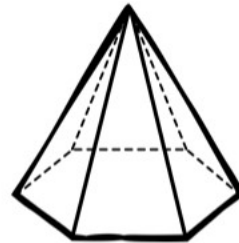
Is the shape a prism or pyramid



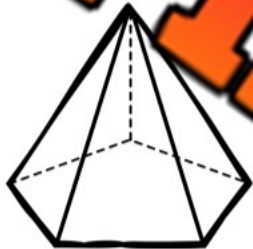
Prism Pyramid



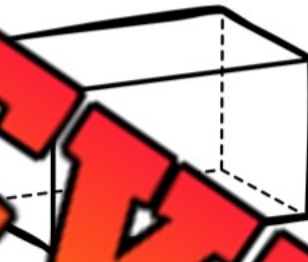
Prism Pyramid



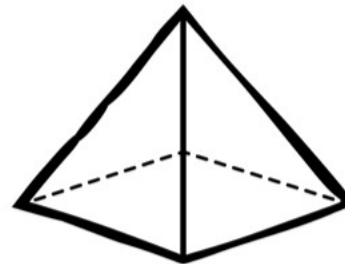
Prism Pyramid



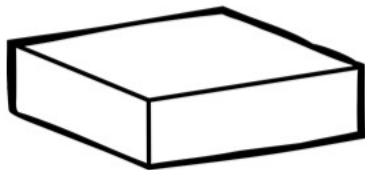
Prism Pyramid



Prism Pyramid



Prism Pyramid



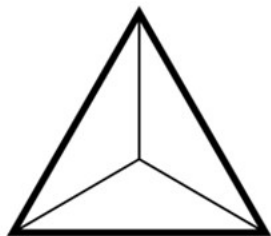
Prism Pyramid



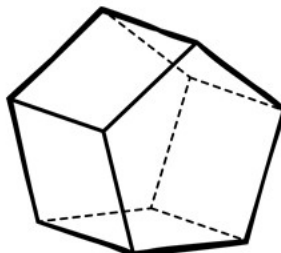
Prism Pyramid



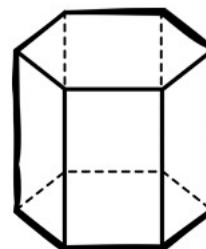
Prism Pyramid



Prism Pyramid



Prism Pyramid

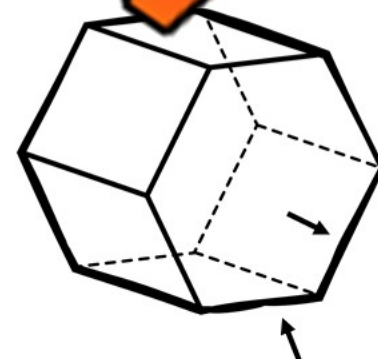
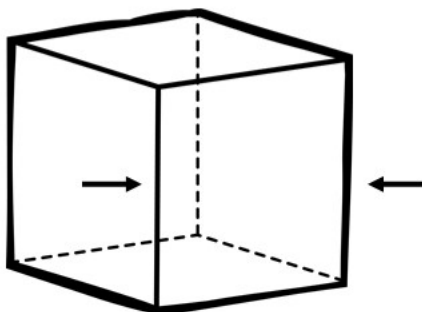
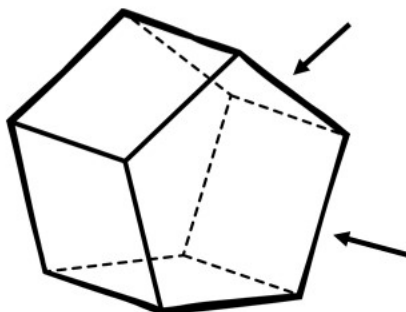
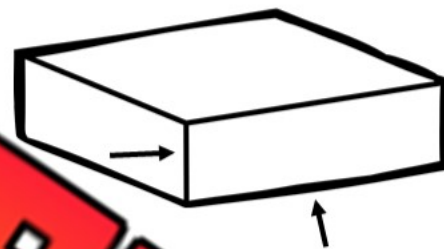
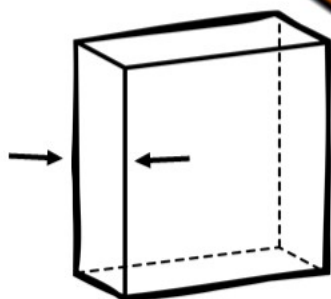
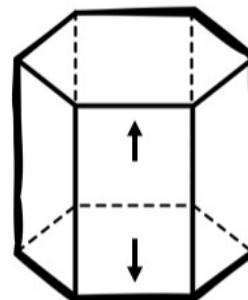
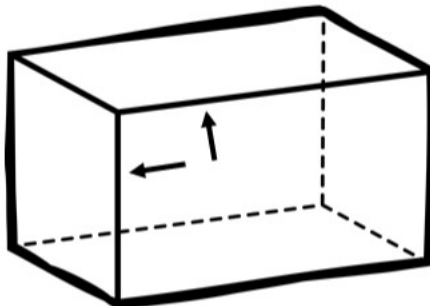
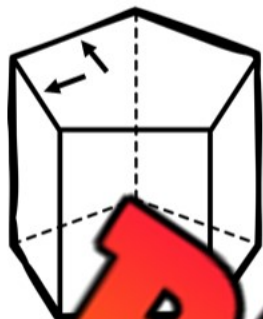


Prism Pyramid

Lines in 3D Objects - Prisms

Questions

Are the lines parallel, intersecting, or perpendicular?



Name: _____

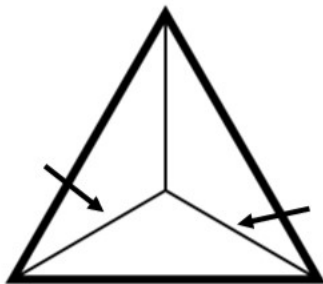
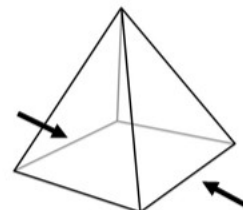
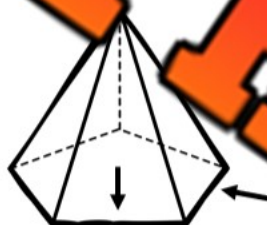
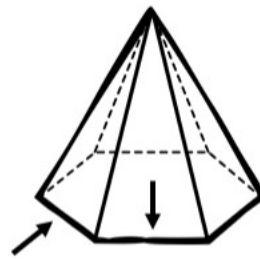
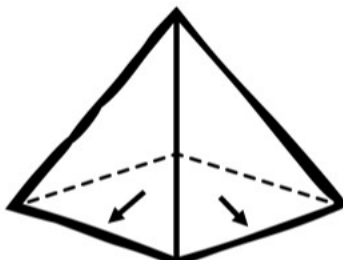
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SS.5

Lines in 3D Objects - Pyramids

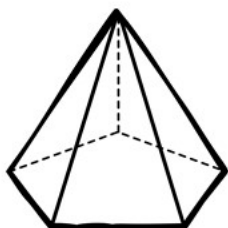
Part 1

Are the lines parallel, intersecting, or perpendicular?

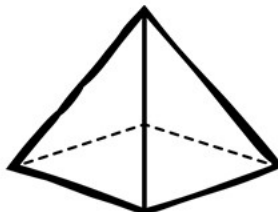


Part 2

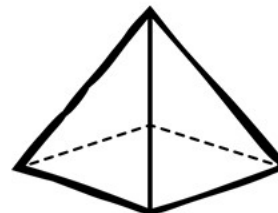
Draw arrows that point to intersecting, parallel, and perpendicular lines



Intersecting



Parallel

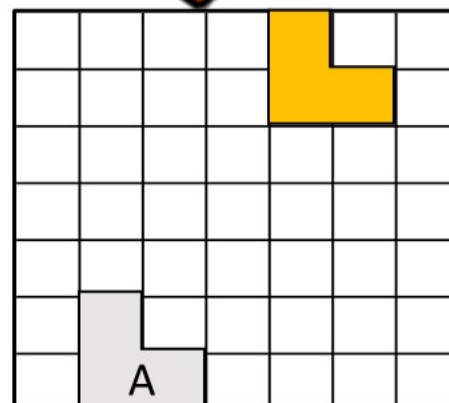
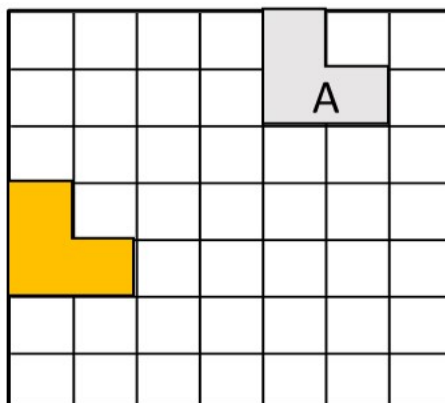
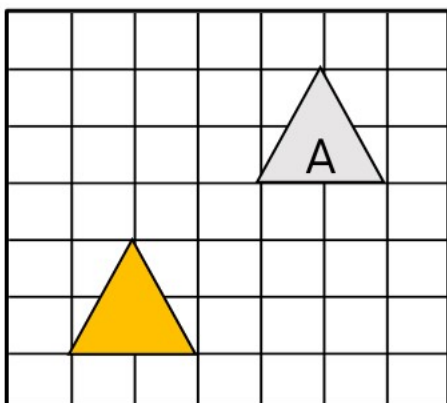
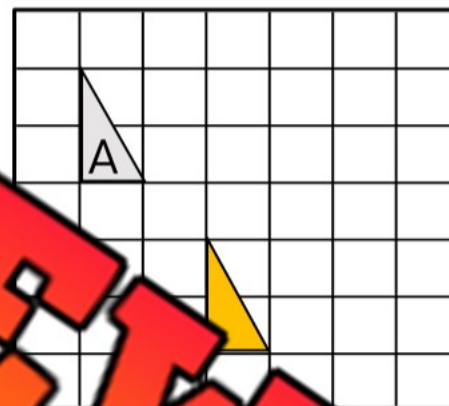
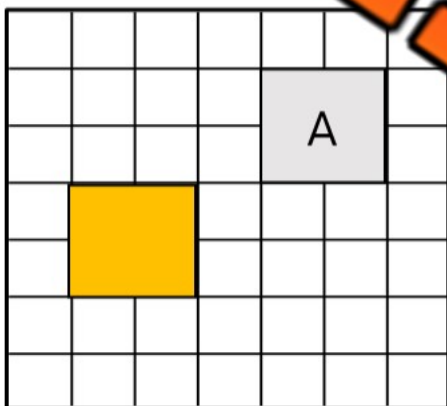
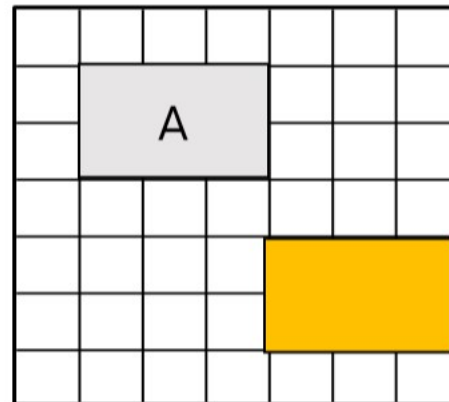
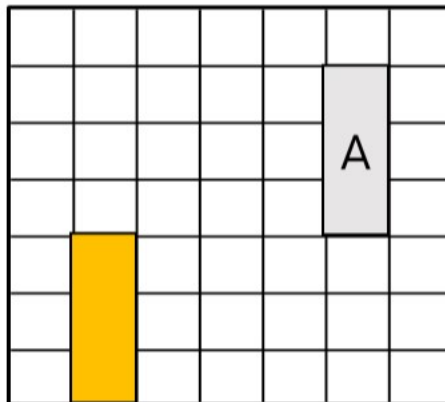
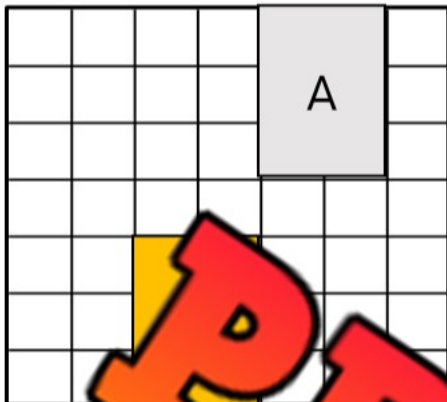


Perpendicular

Describing Translations

Questions

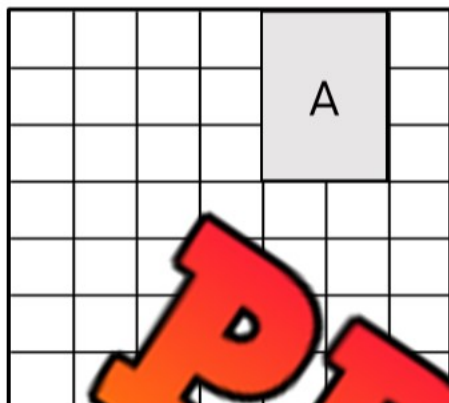
Describe the translations below using arrows. Shape A is the original object



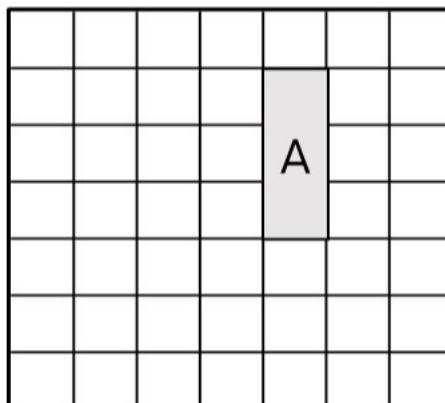
Performing Translations

Questions

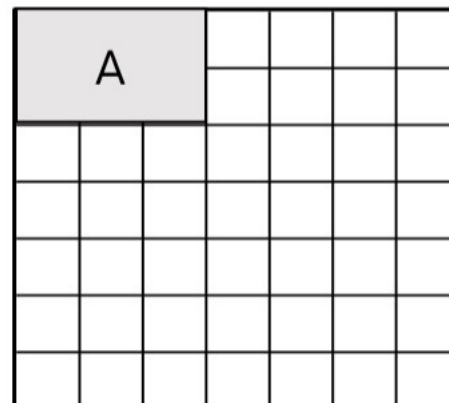
Draw the translations below. Shape A is the original object



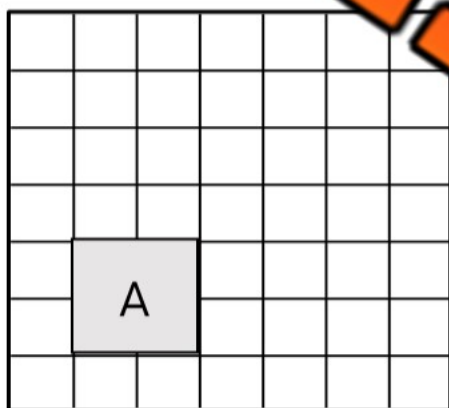
4 ↓



2 ↓, 3 ←



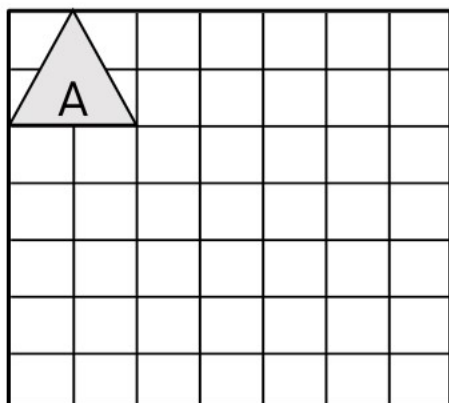
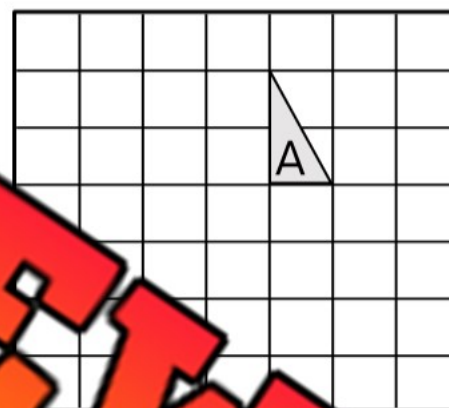
3 ↓, 2 →



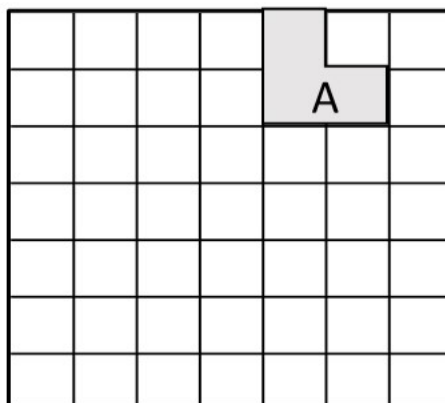
2 ↑, 4 →



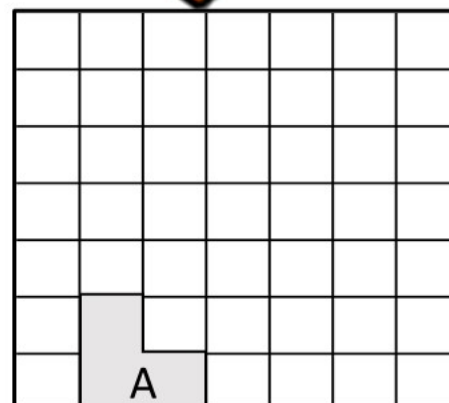
3 ↓, 2 →



3 ↓, 4 →



3 ↓, 4 ←



5 ↑, 4 →

Name: _____

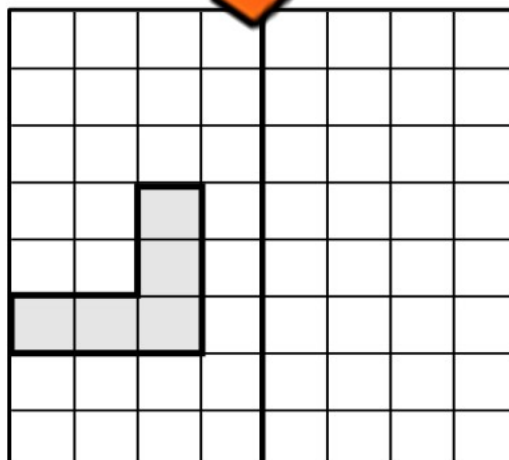
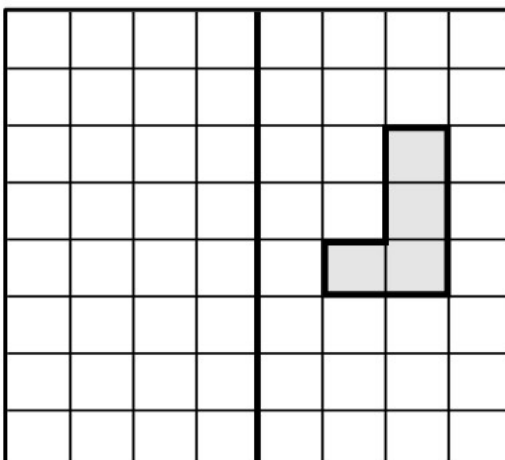
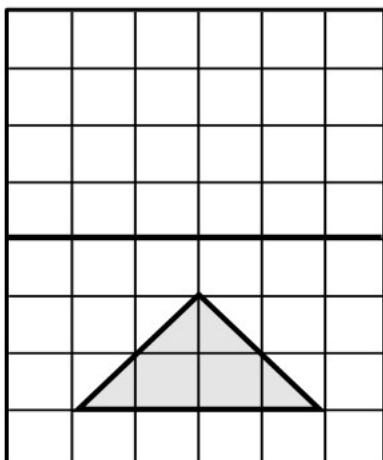
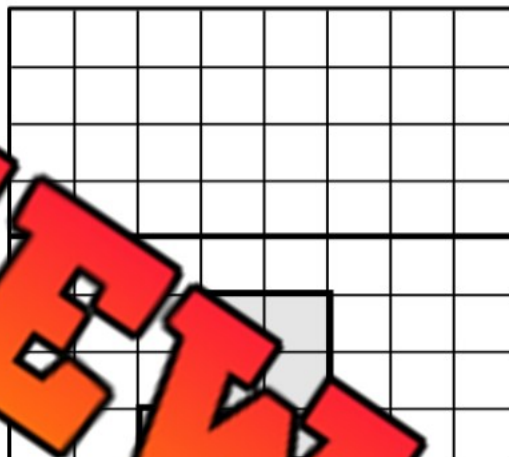
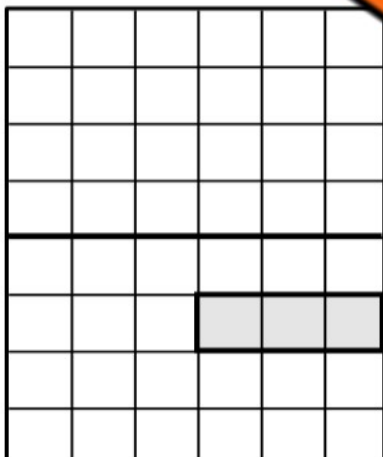
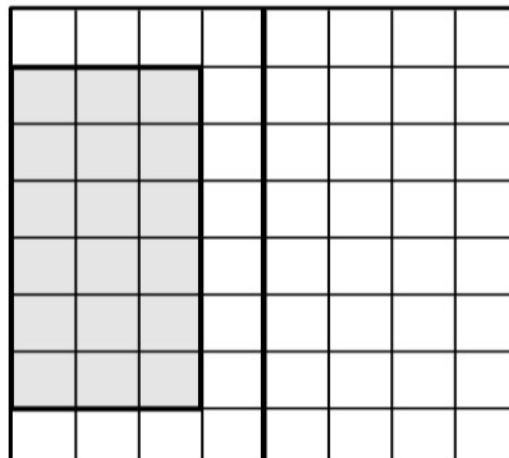
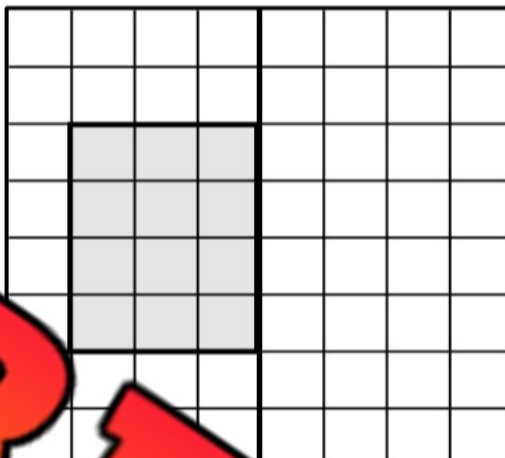
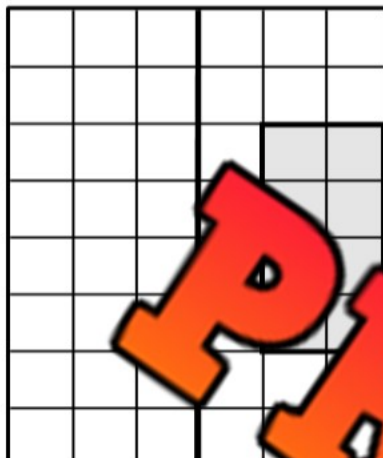
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Drawing Reflections

Questions

Reflect the shapes across the mirror line



PREVIEW

Clockwise and Counterclockwise Rotations

Rotations can either be clockwise or counterclockwise.

A **clockwise** rotation moves the same way the minute, second, and hour hands move on a clock.

A **counterclockwise** rotation moves the opposite way of a clockwise turn.

We can rotate things a lot or a little. Check out the three turns below.

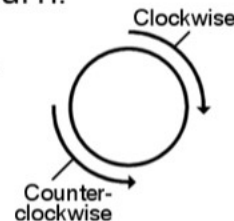
360°
rotation



180°
rotation



90°
rotation



Questions: How will the object move? Circle the correct answer

1)



- ☐ Clockwise 90° rotation
- ☐ Clockwise 180° rotation
- ☐ Counterclockwise 90° rotation

2)



- ☐ Clockwise 90° rotation
- ☐ Clockwise 180° rotation
- ☐ Counterclockwise 90° rotation

3)



- ☐ Clockwise 90° rotation
- ☐ Clockwise 180° rotation
- ☐ Counterclockwise 360° rotation

4)



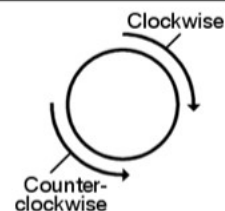
- ☐ Clockwise 90° rotation
- ☐ Clockwise 180° rotation
- ☐ Counterclockwise 90° rotation

5)



- ☐ Clockwise 90° rotation
- ☐ Counterclockwise 90° rotation
- ☐ Counterclockwise 180° rotation

Clockwise and Counterclockwise Rotations

360°
rotation180°
rotation90°
rotation

Questions

Describe how the car rotated. Example - Clockwise 180° rotation

1)



2)



3)



4)



5)



6)

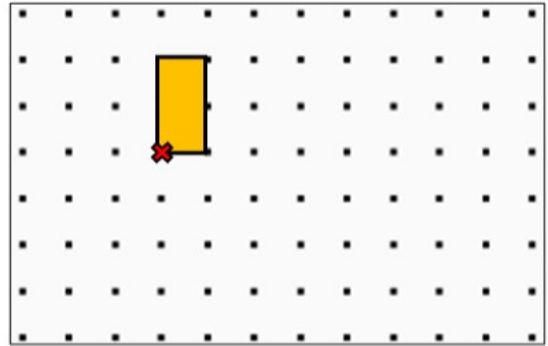


Drawing Rotations

Questions

Rotate the shapes around the point marked **x**

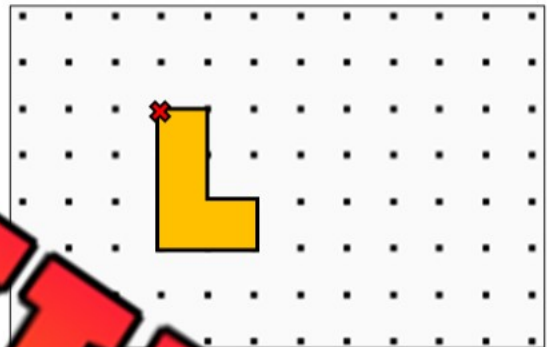
1) 90° clockwise rotation



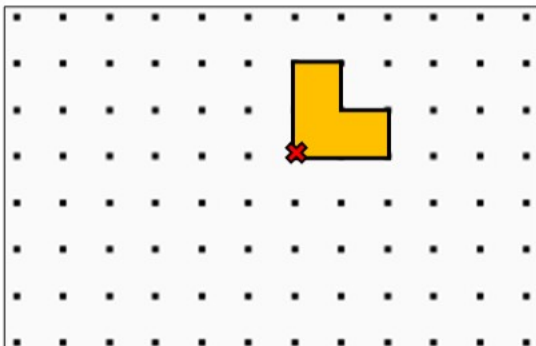
2) 180° clockwise rotation



3) 90° counter-clockwise rotation



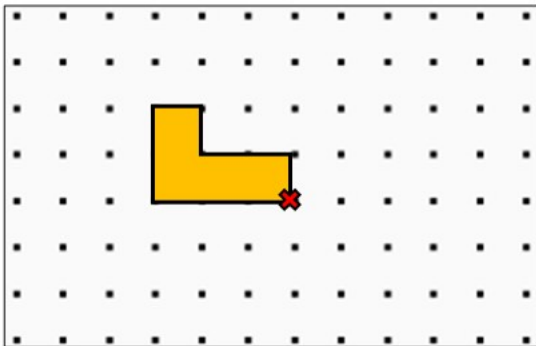
4) 360° clockwise rotation



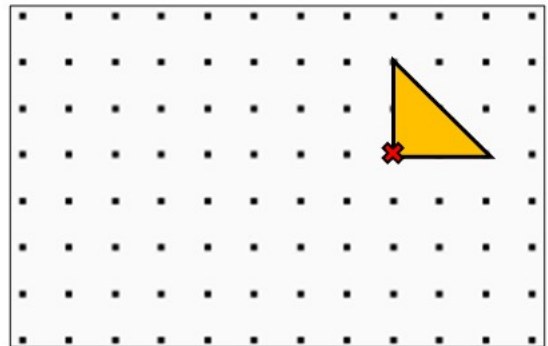
5) 90° counter-clockwise rotation



6) 180° counter-clockwise rotation



7) 90° clockwise rotation

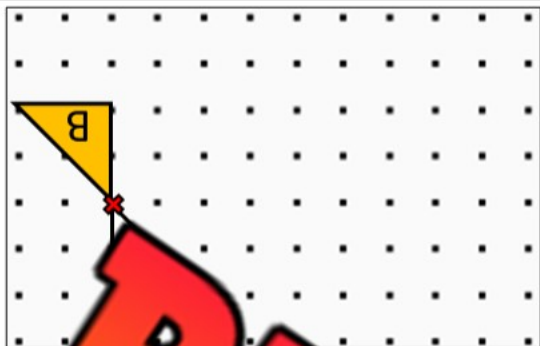


8) 180° counter-clockwise rotation

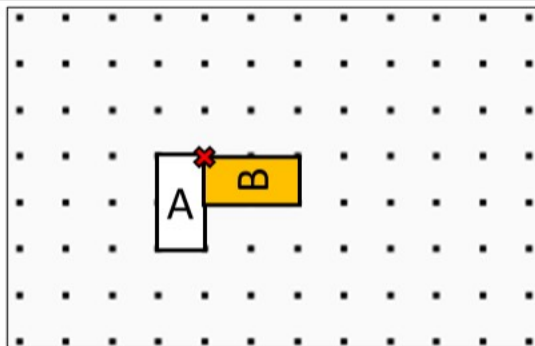
Describing Rotations

Questions

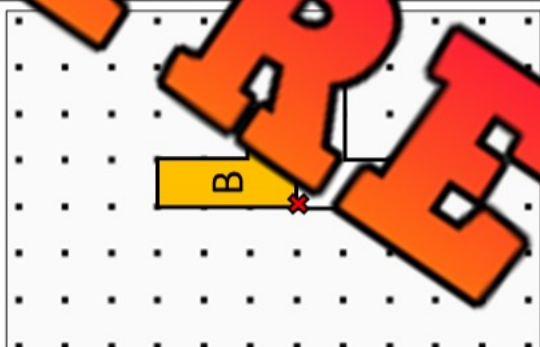
Describe the rotations. Shape A is the original shape



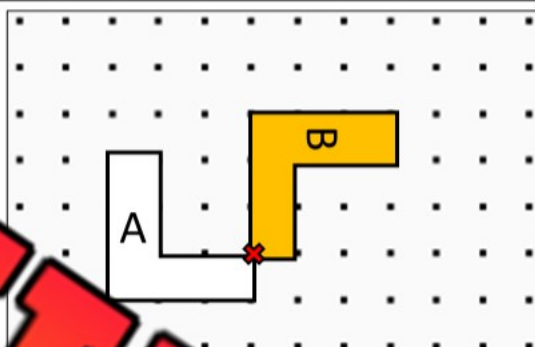
1) _____



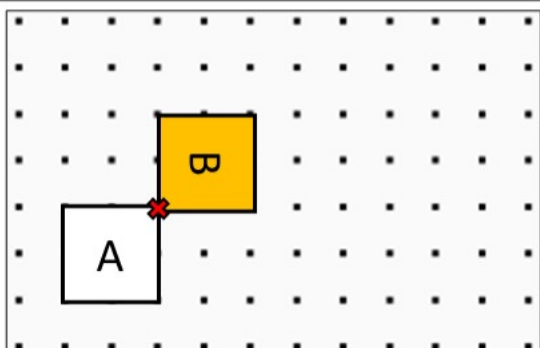
2) _____



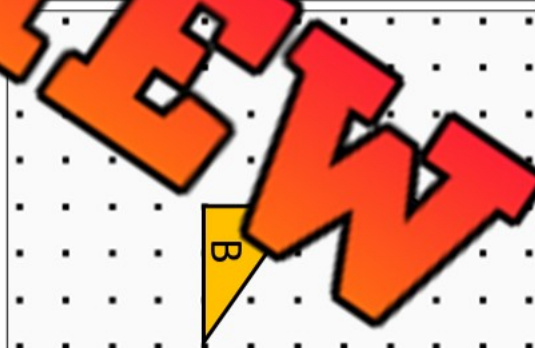
3) _____



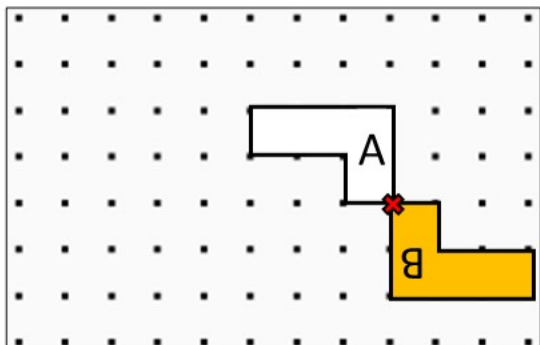
4) _____



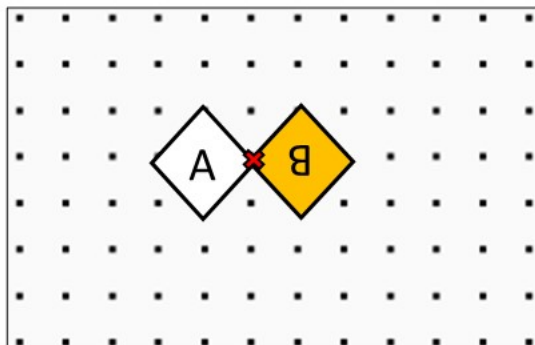
5) _____



6) _____



7) _____



8) _____