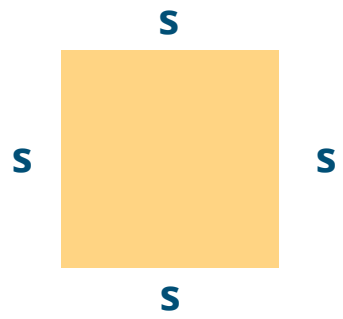
DIAMOND TUTORING

# PERIMETER FORMULAS

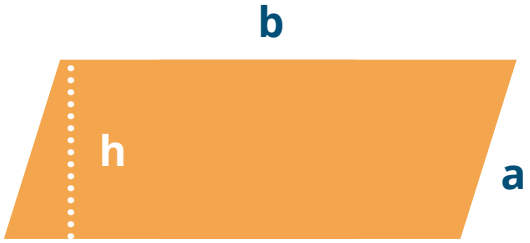



## Square

$P = 4s$

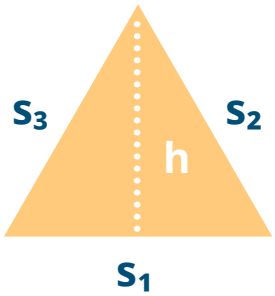

## Rectangle

$P = 2(L + W)$



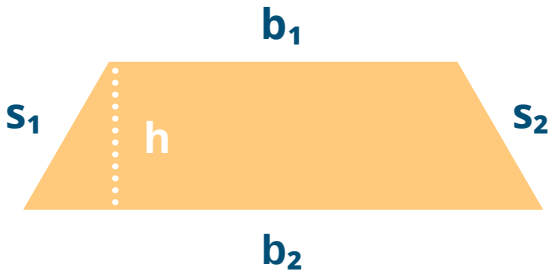

## Parallelogram

$P = 2(a + b)$



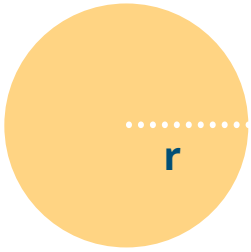

## Triangle

$P = s_1 + s_2 + s_3$




## Trapezoid

$P = b_1 + b_2 + s_1 + s_2$




## Circle

$C = \pi d = 2\pi r$

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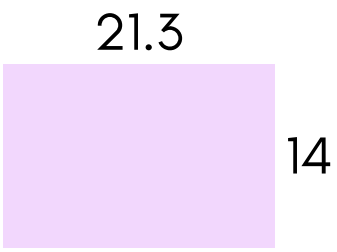
# PERIMETER OF A RECTANGLE

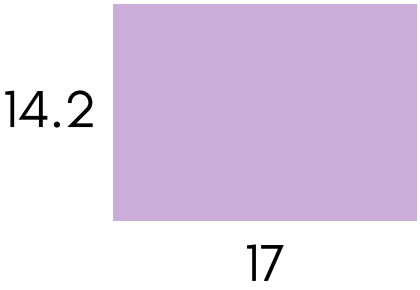
Find the perimeter of each rectangle.



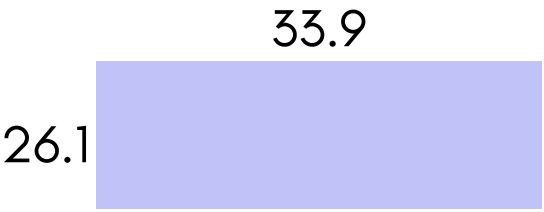

Perimeter =



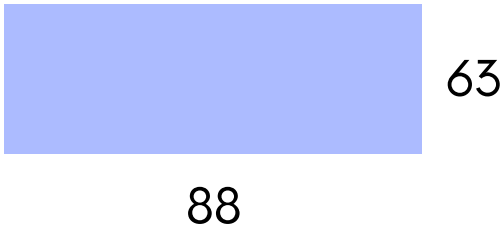

Perimeter =



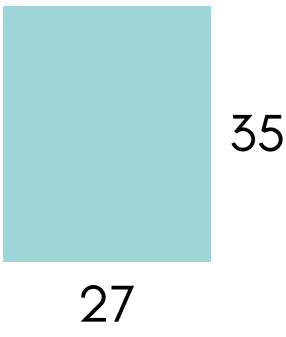

Perimeter =




Perimeter =




Perimeter =




Perimeter =

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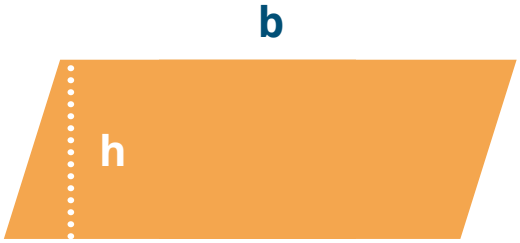
# AREA FORMULAS


## Square

$A = s^2$

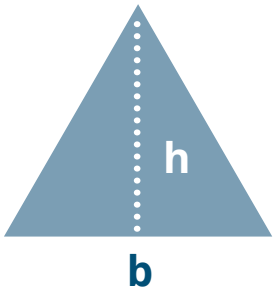

## Rectangle

$A = lw$



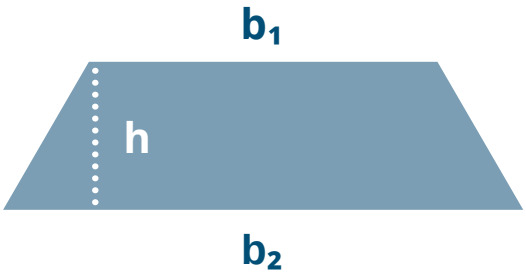

## Parallelogram

$A = bh$



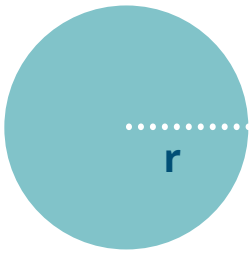

## Triangle

$A = \frac{1}{2}bh$




## Trapezoid

$A = \frac{1}{2}h(b_1 + b_2)$




## Circle

$A = \pi r^2$

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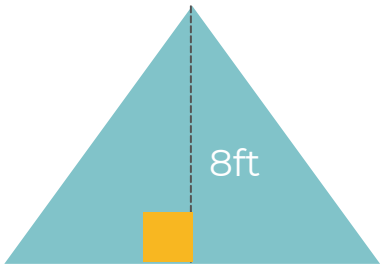
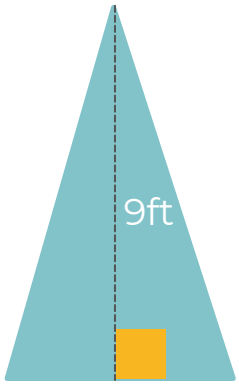
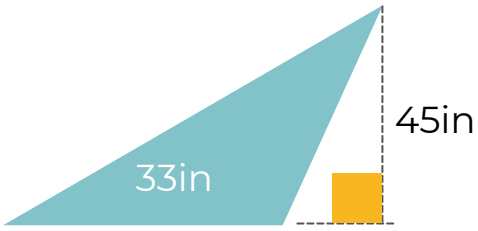
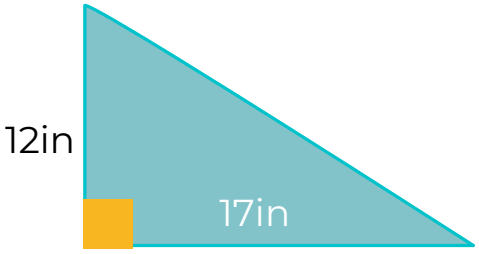
# Solving for Area: Triangles

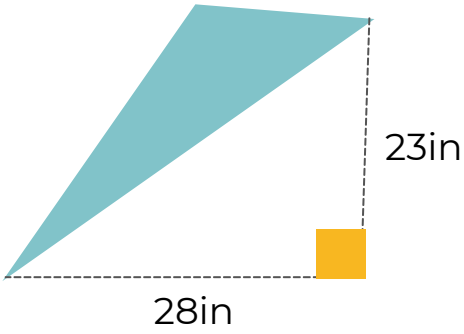
Solve for the area of each triangle

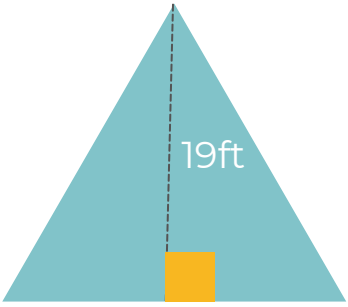


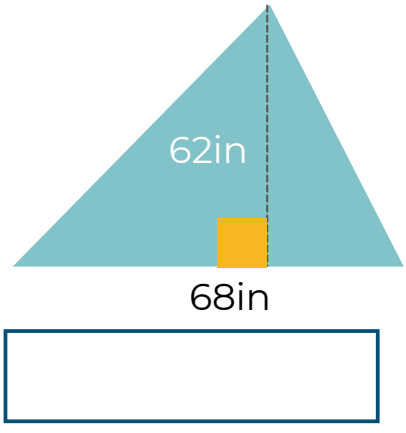



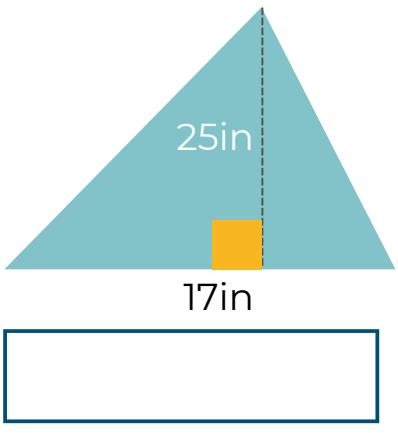



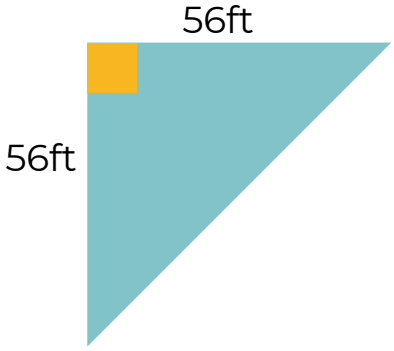



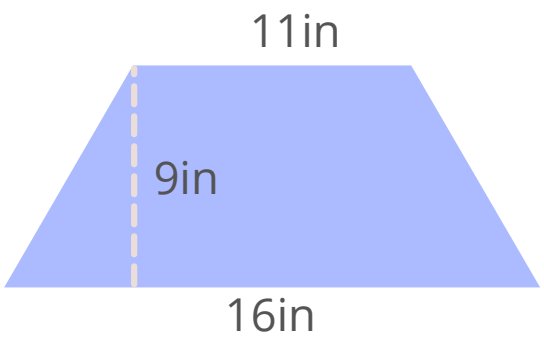



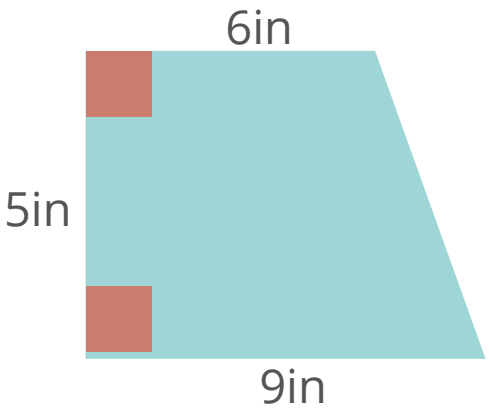
DIAMOND TUTORING

# AREA OF A TRAPEZOID

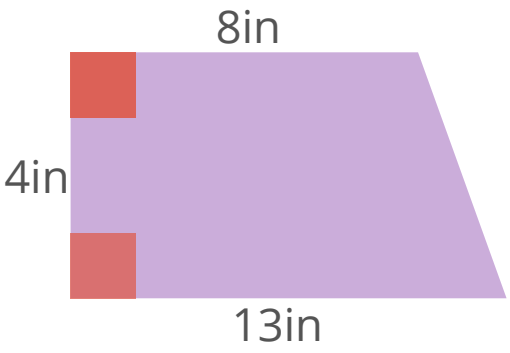
Find the area of each trapezoid.



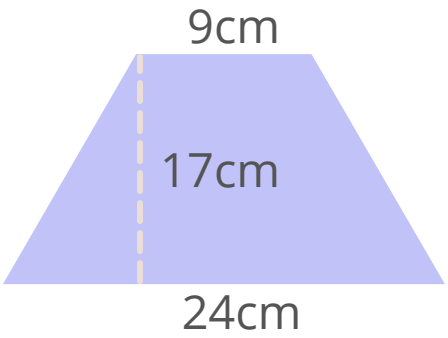

Area =



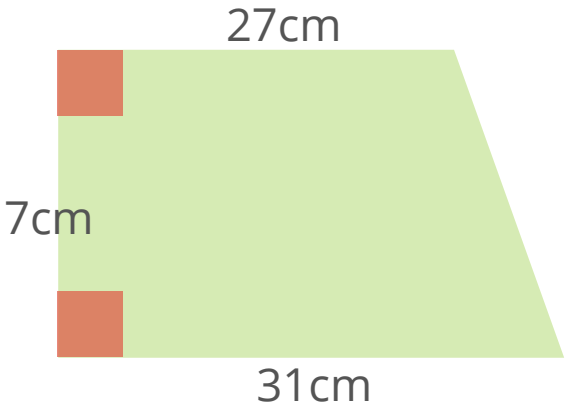

Area =




Area =




Area =



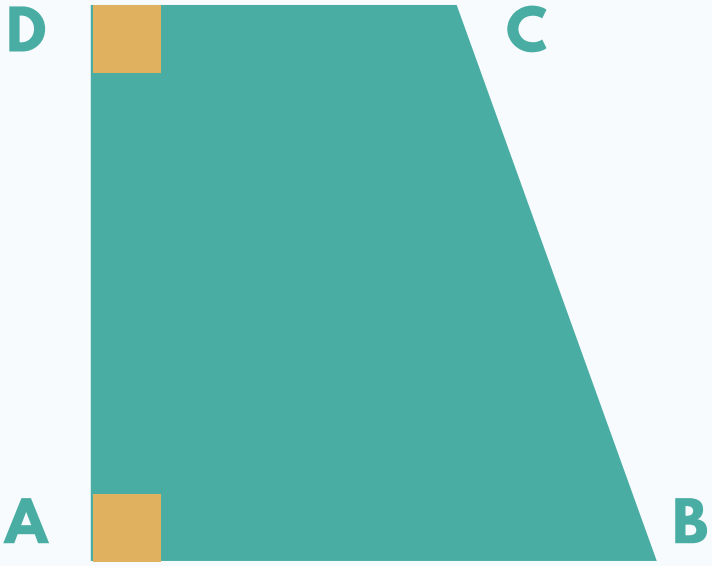

Area =

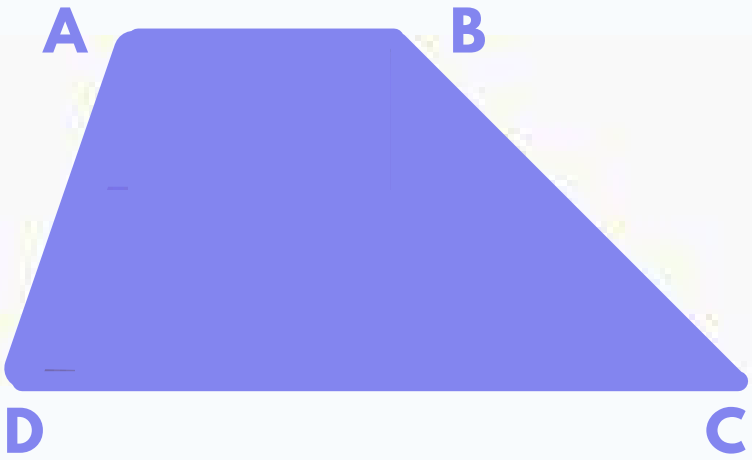

Area =

# TYPES OF TRAPEZOIDS


**Isosceles Trapezoids:**
Trapezoids with equal leg lengths (the non-parallel sides)

**Right Trapezoids:**
Trapezoids that have one pair of right angles

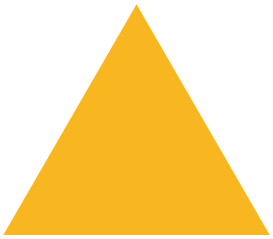


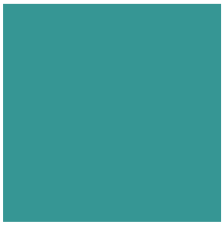

**Scalene Trapezoids**
Trapezoids that do not have equal sides or angles

DIAMOND TUTORING

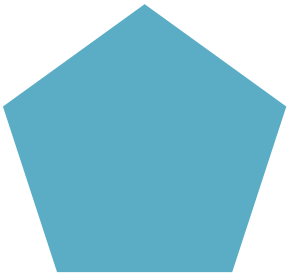
# TYPES OF POLYGONS



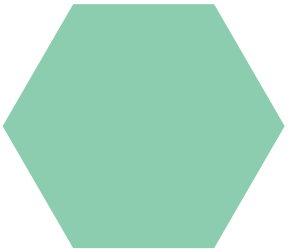
3 sides, 3 vertices, no diagonals,
sum of interior angles is 180°



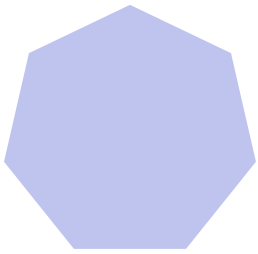
4 sides, 4 vertices, has 2 diagonals,
sum of interior angles is 360°



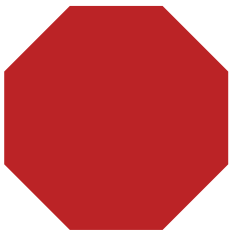
5 sides, 5 vertices, has 5 diagonals,
sum of interior angles is 540°



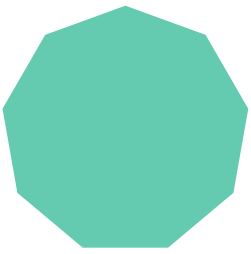
6 sides, 6 vertices, has 9 diagonals,
sum of interior angles is 720°



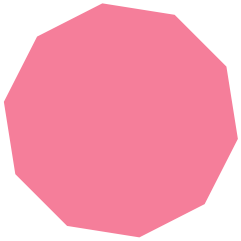
7 sides, 7 vertices, has 14 diagonals,
sum of interior angles is 900°



8 sides, 8 vertices, has 20 diagonals,
sum of interior angles is 1080°



9 sides, 9 vertices, has 27 diagonals,
sum of interior angles is 1260°



10 sides, 10 vertices, has 35 diagonals,
sum of interior angles is 1440°

DIAMOND TUTORING

# Classifying Quadrilaterals

Write the name of each quadrilateral

square rhombus rectangle parallelogram trapezoid



_____

_____

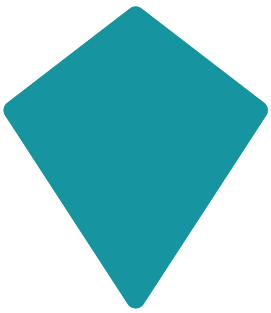
_____

_____



_____

_____



_____

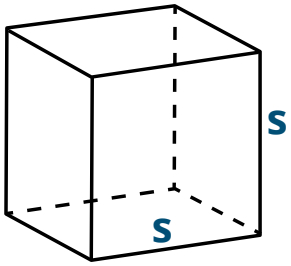
_____



_____

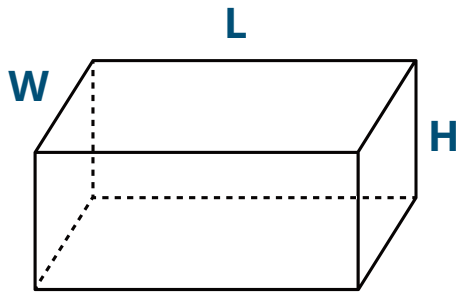
DIAMOND TUTORING

# SURFACE AREA FORMULAS



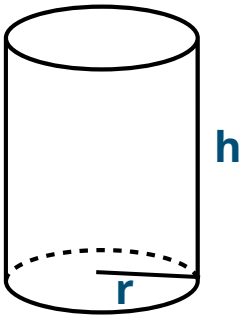

## Cube

Total SA = $6s^2$



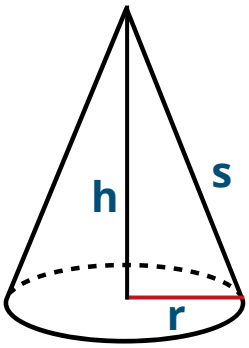

## Cuboid

Total SA = $2(LW + WH + HL)$



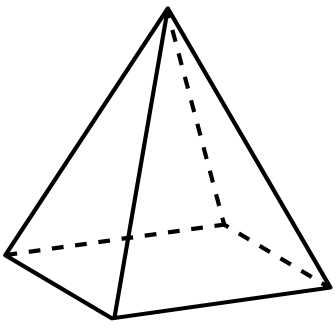

## Cylinder

Total SA = $2\pi rh + 2\pi r^2$



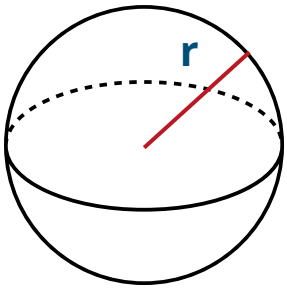

## Cone

Total SA = $\pi rs + \pi r^2$



## Pyramid

Total SA = $2bs + b^2$




## Sphere

Total SA = $4\pi r^2$

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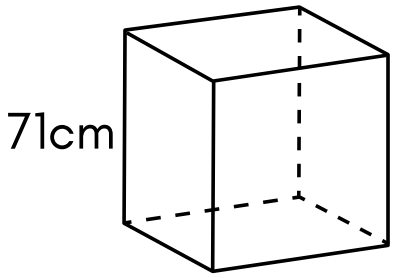
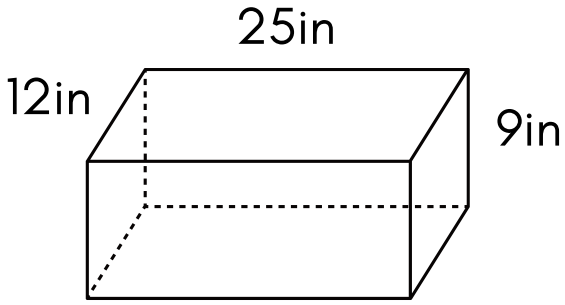
# SURFACE AREA PRACTICE

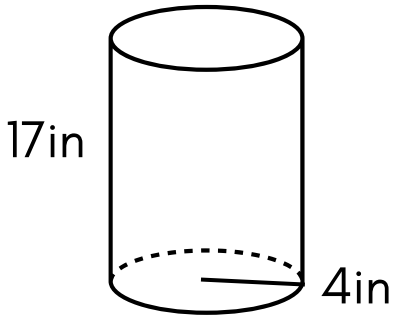
Find the total surface area of each shape



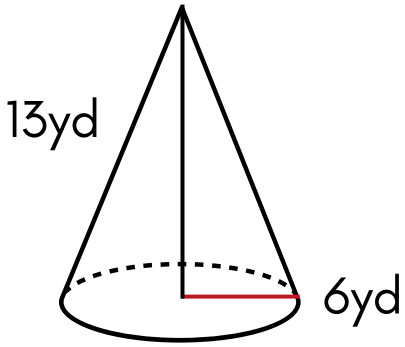

Total SA =



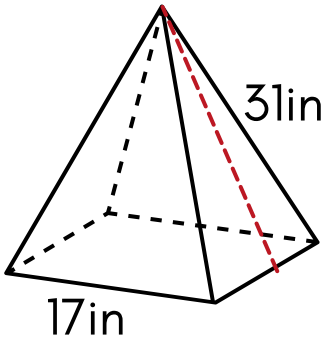

Total SA =



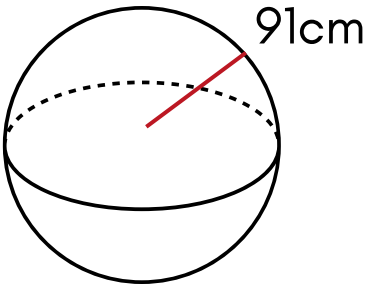

Total SA =




Total SA =




Total SA =



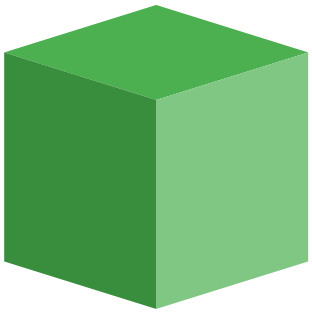

Total SA =

DIAMOND TUTORING

# SURFACE AREA OF A CUBE

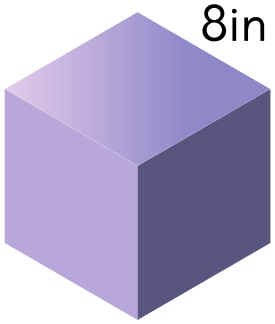
Find the total surface area of each cube

64cm



Total SA =

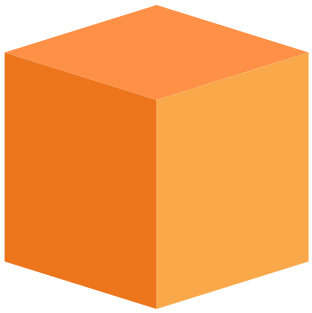
8in



Total SA =

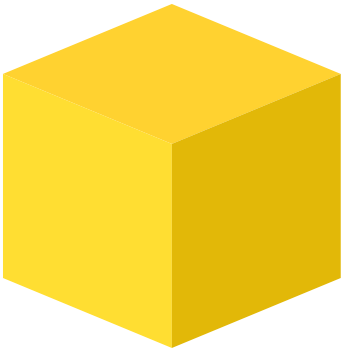
16in

Total SA =



53cm

Total SA =



82cm

Total SA =

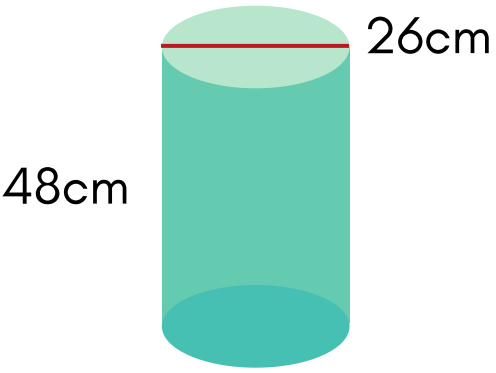
27in

Total SA =

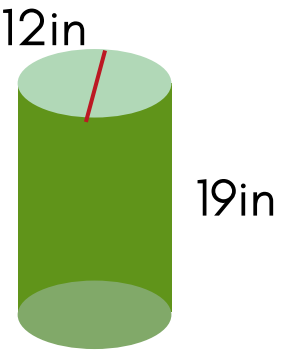
DIAMOND TUTORING

# SURFACE AREA OF A CYLINDER

Find the total surface area of each cylinder




Total SA =

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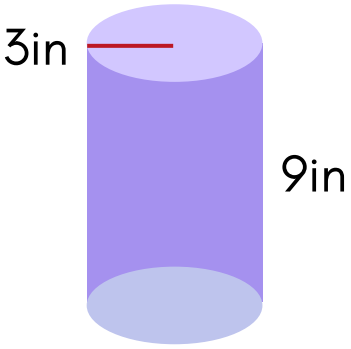


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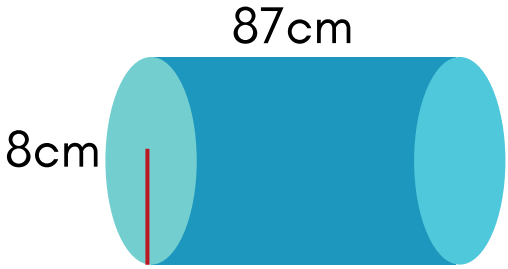


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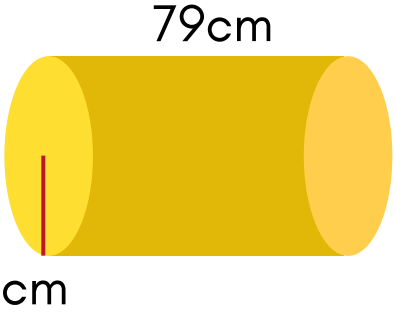


Total SA =


Total SA =

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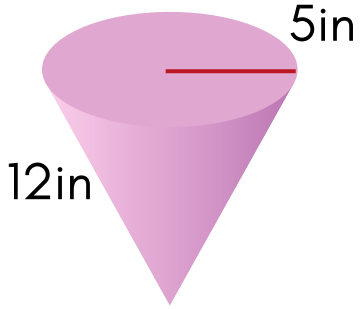
# SURFACE AREA OF A CONE

Find the total surface area of each cone

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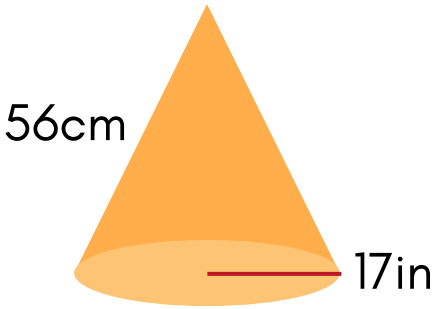


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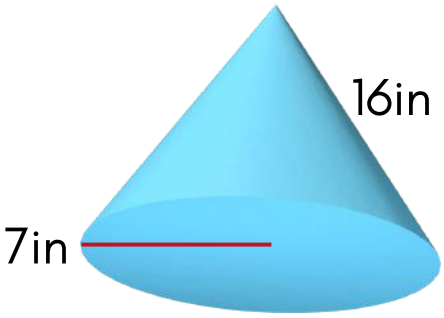


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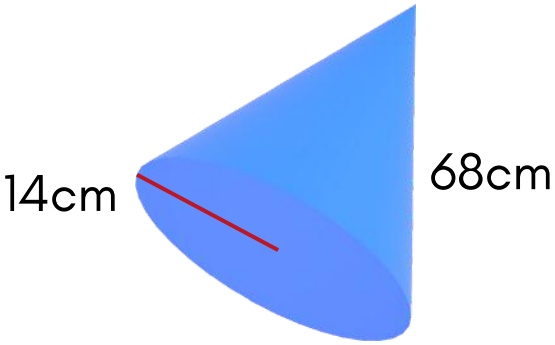


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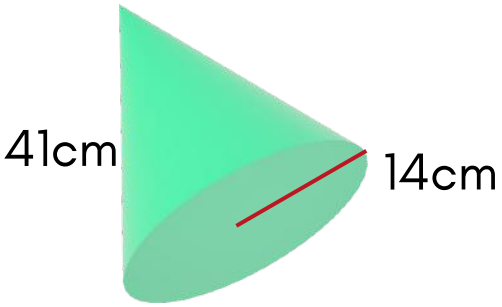


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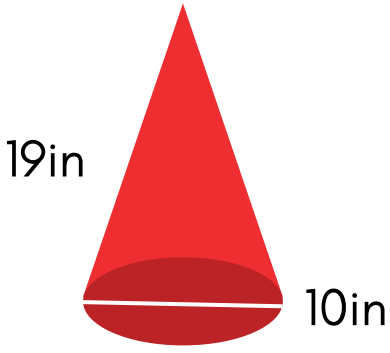


Total SA =

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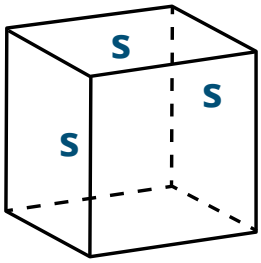
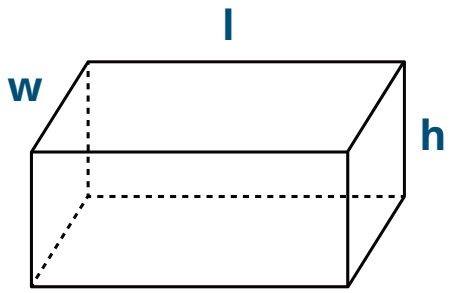
# VOLUME FORMULAS



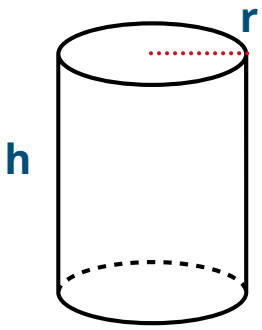

## Cube

$V = s^3$



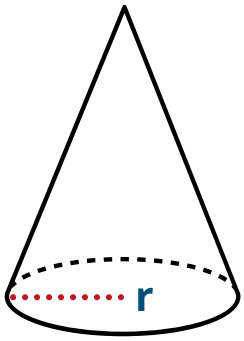

## Cuboid

$V = lwh$



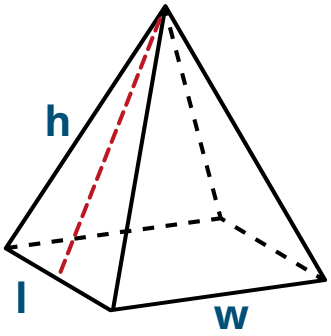

## Cylinder

$V = \pi r^2 h$



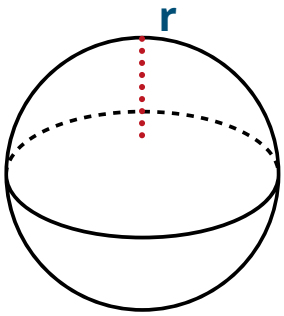

## Cone

$V = 1/3\ \pi r^2 h$




## Rectangular Pyramid

$V = 1/3lwh$




## Sphere

$V = (4/3)\pi r^3$

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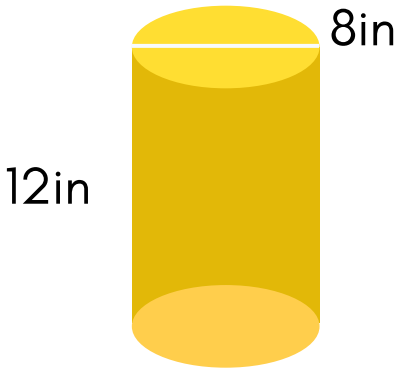
# VOLUME OF A CYLINDER

Find the total surface area of each cylinder

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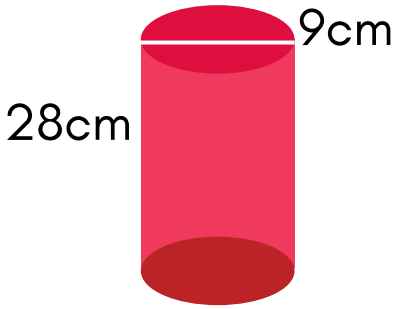


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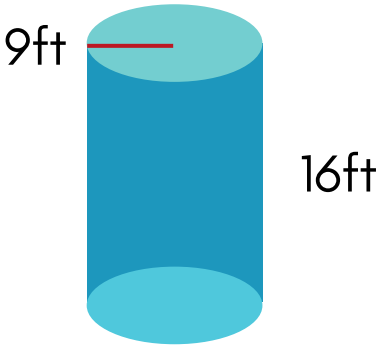


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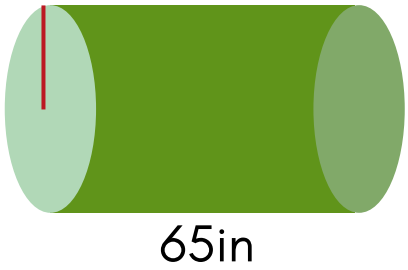


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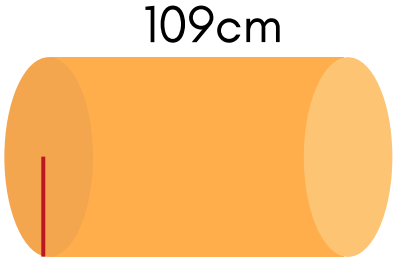


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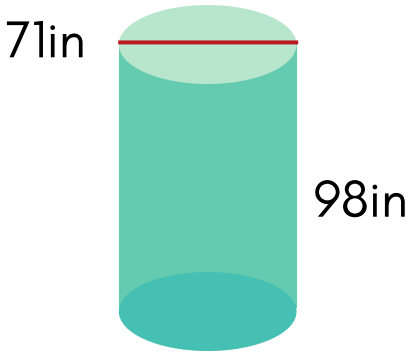


V =

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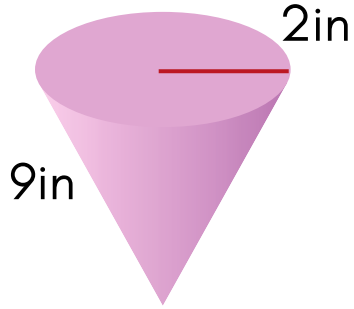
# VOLUME OF A CONE

Find the volume of each cone

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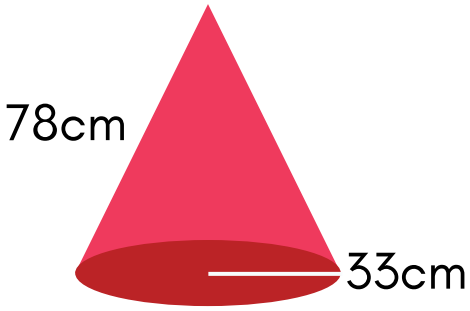


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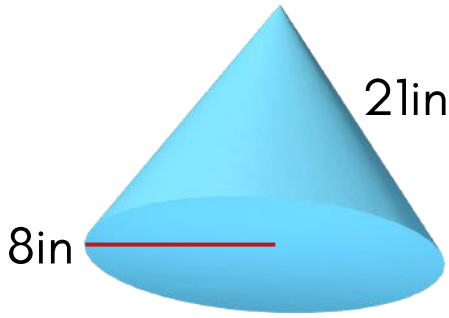


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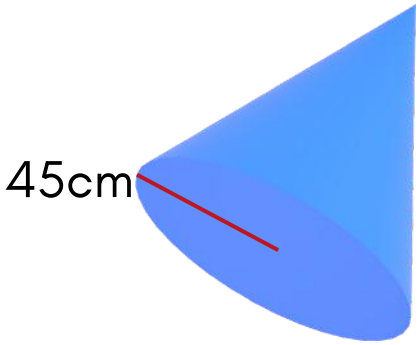


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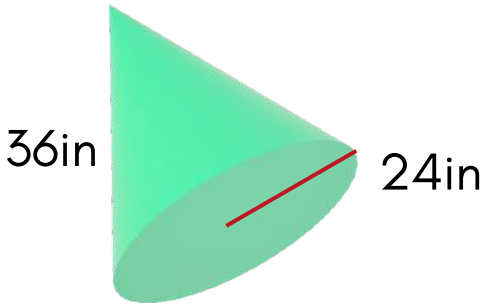


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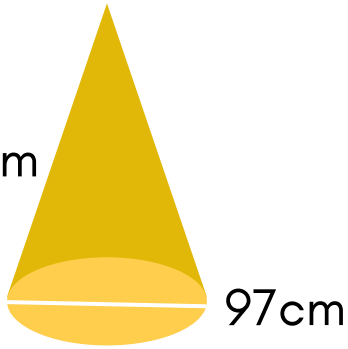


V =

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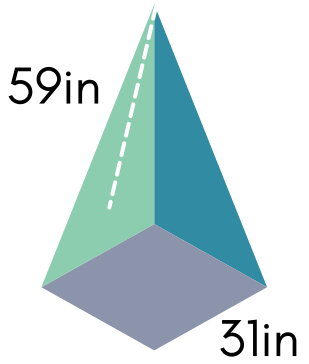
# VOLUME OF PYRAMID

Find the volume of each pyramid

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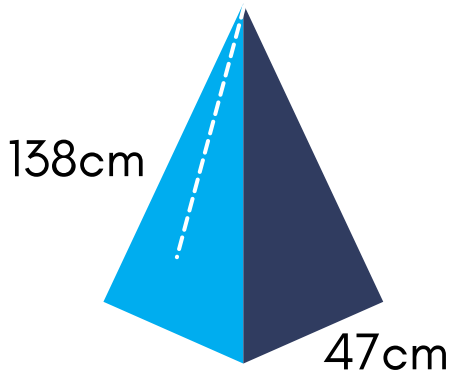


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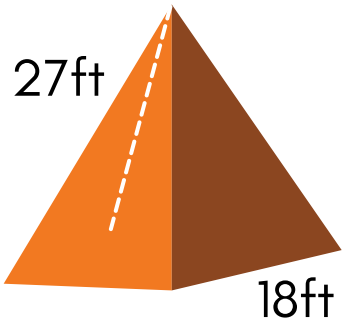


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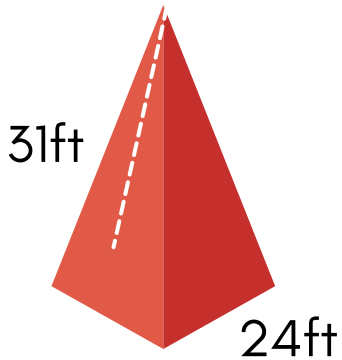


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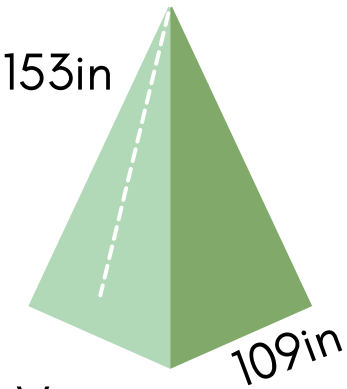


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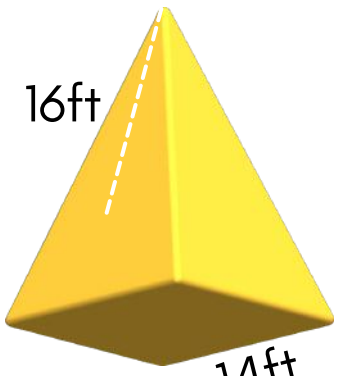


V =

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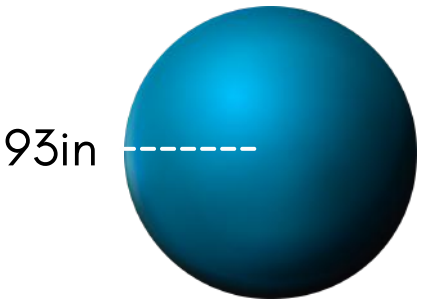
# VOLUME OF A SPHERE

Find the total surface area of each cone

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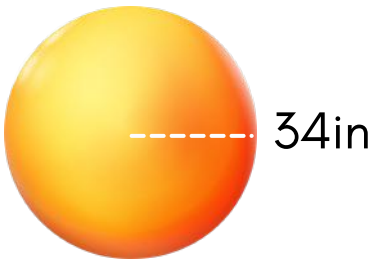


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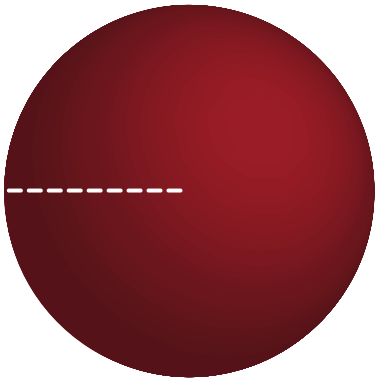


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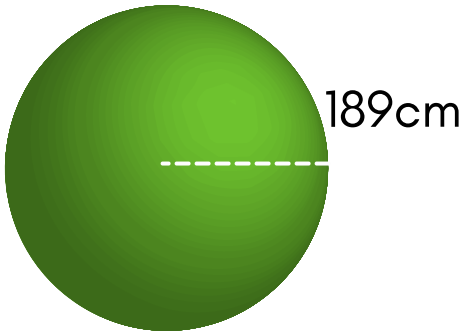


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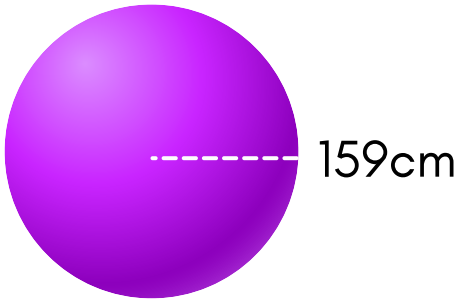


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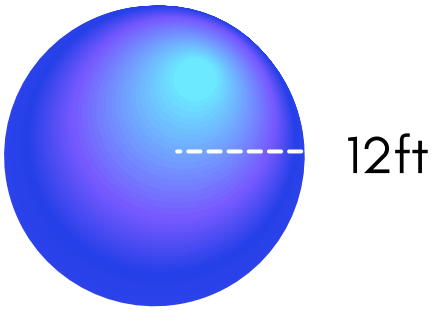



V =

DIAMOND TUTORING

# TYPES OF LINES, SEGMENTS, AND RAYS

## Point

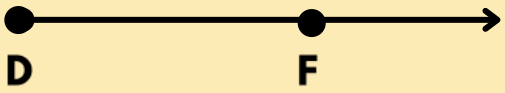
A **point** is an exact location in a space. It has no dimension so it can't be measured.


## Line

A **line** is perfectly straight and extends forever in both directions.


## Ray

A **Ray** is a part of a line, with one endpoint, that continues without end in one direction

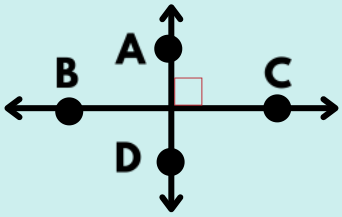



## Line Segment

A **Line Segment** is a finite portion of a line, it includes two end points

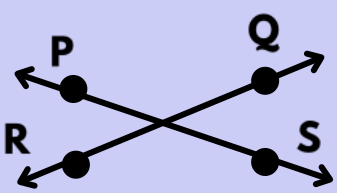

## Perpendicular Lines

**Perpendicular Lines** are two lines that intersect to form four right angles




## Intersecting Lines

**Intersecting Lines** are lines that cross at exactly one point



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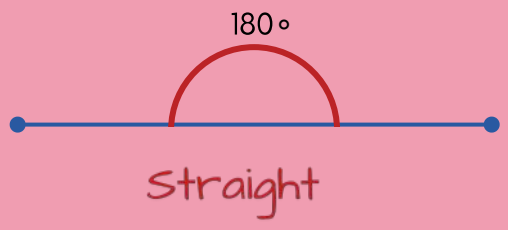
# TYPES OF ANGLES

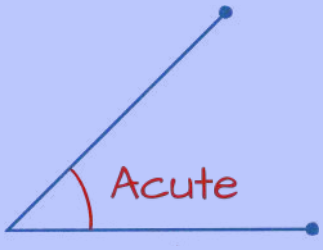
## Straight Angle

A **straight angle** is an angle that measures exactly 180°



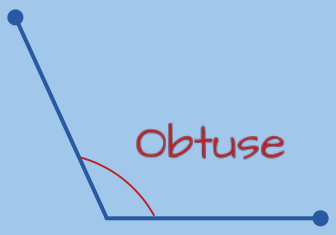

## Acute Angle

An **acute angle** is an angle that is less than 90°



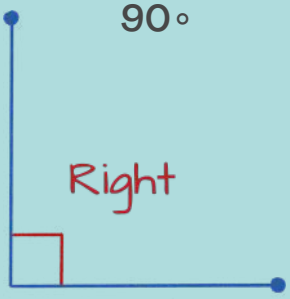

## Obtuse Angle

An **obtuse angle** measures more than 90° but less than 180°



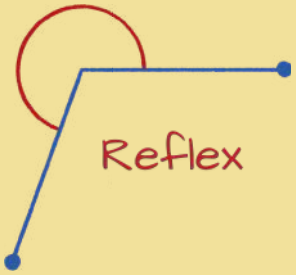

## Right Angle

A **right angle** is an angle that measures exactly 90°



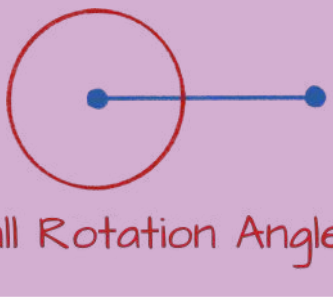

## Reflex Angle

A **reflex angle** is greater than 180° and less than 360°




## Full Rotation Angle

A **full rotation angle** is an angle equal to 360°



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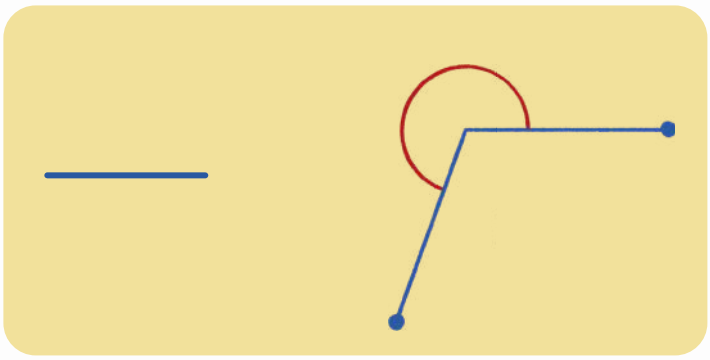
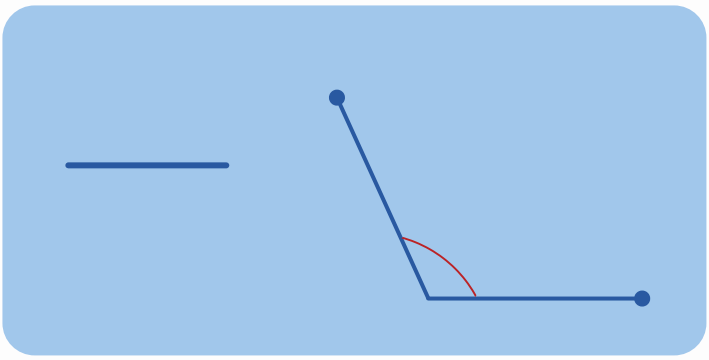
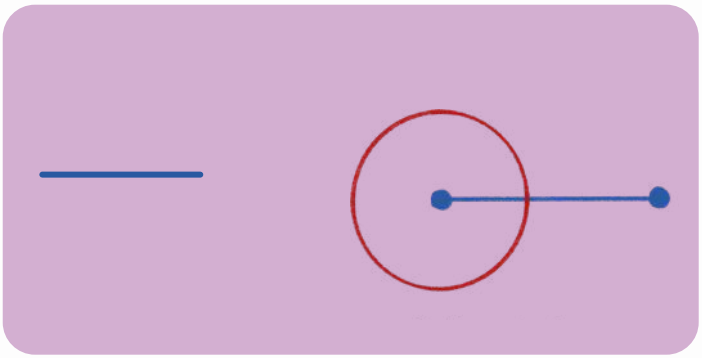
# TYPES OF ANGLES

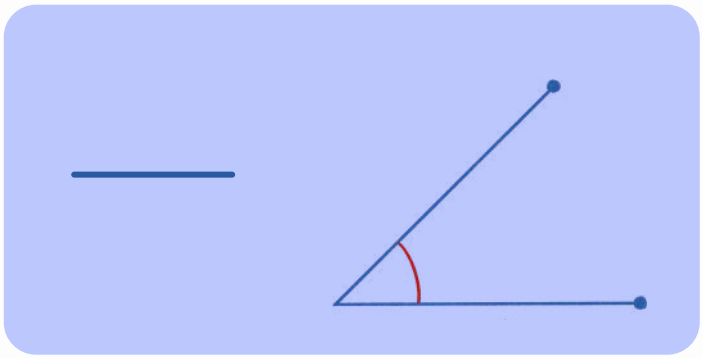
Match the correct number for each angle

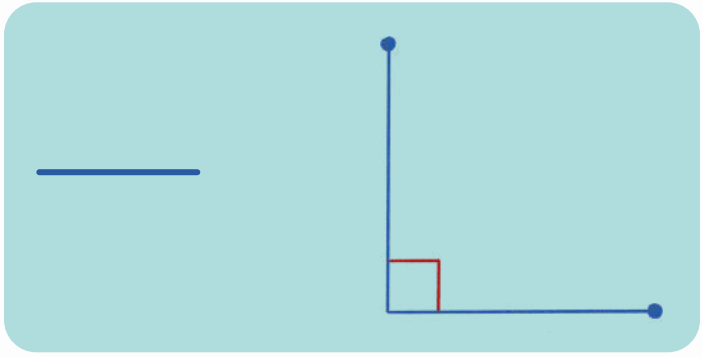
1. Right Angle
2. Obtuse Angle
3. Straight Angle
4. Acute Angle
5. Full Rotation Angle
6. Reflex Angle

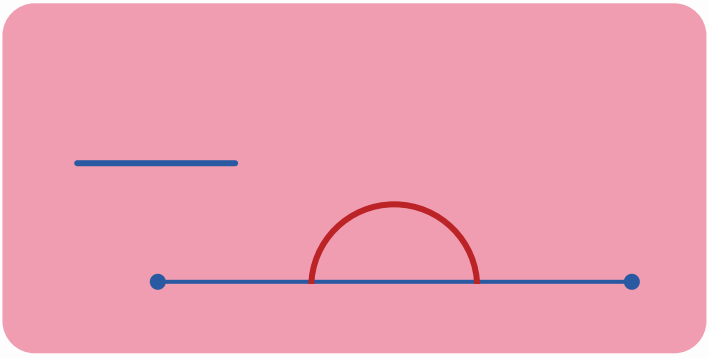












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# ANGLE IDENTIFICATION

- Acute triangles have three angles less than 90°
- Obtuse triangles have one obtuse angle greater than 90°
- Right triangles have one 90° angle
- Equilateral triangles have three equal angles
- Isosceles triangles have two equal angles
- Scalene triangles have no equal angles

**Name each of these triangles using its angles.**

1. Triangle ABC has angles that measure 100°, 40°, and 40° _____

2. Triangle DEF has angles that measure 60°, 70°, and 50° _____

3. Triangle GHI has angles that measure 60°, 60°, and 60° _____

4. Triangle JKL has angles that measure 110°, 30°, and 40° _____

5. Triangle MNO has angles that measure 90°, 45°, and 45° _____

6. Triangle PQR has angles that measure 90°, 40°, and 50° _____

7. Triangle STU has angles that measure 80°, 50°, and 50° _____

8.Triangle VWX has angles that measure 130°, 30°, and 20° _____

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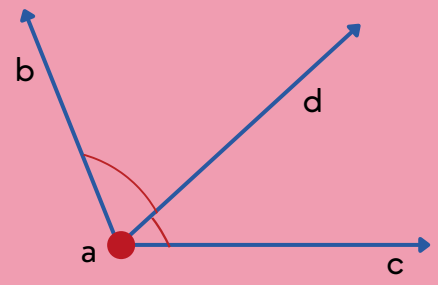
# TYPES OF ANGLE PAIRS

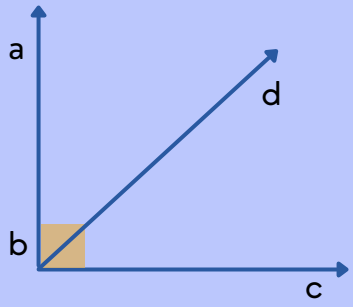
## Adjacent Angles

Angles that share a vertex, one side, and no interior points.



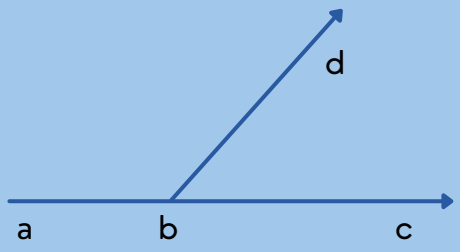

## Complementary Angles

Two angles that add up to 90°



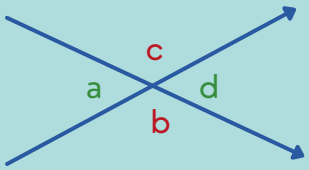

## Supplementary Angles

Two angles that add up to 180°



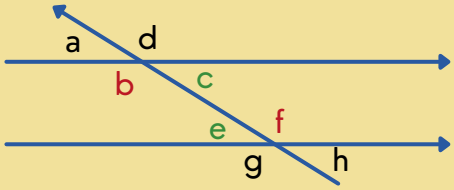

## Vertical Angles

When two lines intersect two pairs of congruent angles are formed (Angles are opposite to each other)



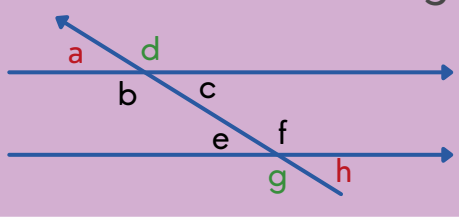

## Alternate Interior Angles

When a transversal intersects a pair of lines, alternate interior angles are formed on opposite sides of the transversal




## Alternate Exterior Angles

When two lines are crossed by a transversal, the opposite angle pairs on the outside of the lines are alternate exterior angles.



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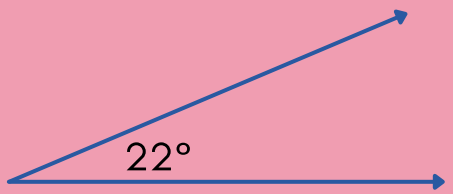
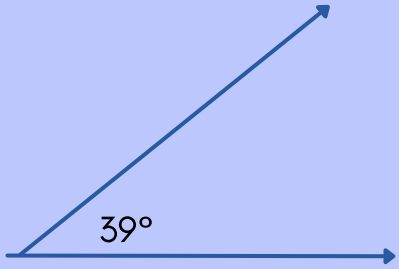
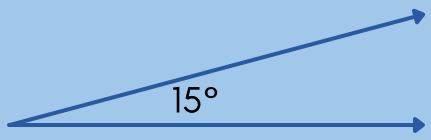
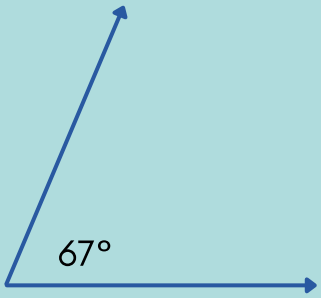
# COMPLEMENTARY ANGLES

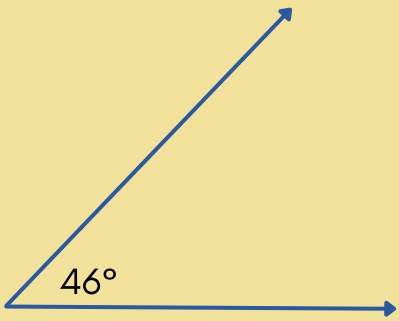
Draw an angle that is complementary to the given angle

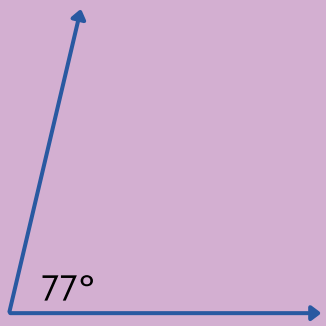


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# SUPPLEMENTARY ANGLES

Draw an angle that is complementary to the given angle