

Name:

Date:

TestPrepSHSAT.com
Your study tool for success.

$a^2 + b^2 = c^2$
 $3^2 + 4^2 = 5^2$

PITAGORAS THEOREM

SERIES ADDITIVE
 $A_n = A_0 + d(n-1)$

AREA
 $A = \pi r^2$

EXONENTS
 $2^{-1} = \frac{1}{2}$
 $\frac{2^4 \cdot 7}{3^2} = 3^{(4+7-2)} = 3^9$

PRIME FACTORIZATION
 $72 = 2^3 \cdot 3^2$
#FACTORS
 $= (3+1)(2+1)$
 $= 4 \cdot 3 = 12$

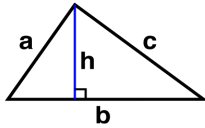
OPPOSING VERTICAL ANGLES
 150°
 $7 + 7 = 150$
 $2x = 150 - 150$
 $x = 90$

WORKSHEET :



Intro Geometry (Area, Perimeter)

Area and Perimeter Formulas

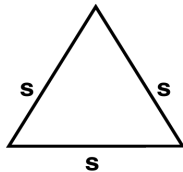


Triangles - Common

A polygon with three angles and three sides.

$$\text{Area} = \frac{1}{2} \text{ base} \times \text{height} = \frac{1}{2} bh$$

$$\text{Perimeter} = a + b + c$$

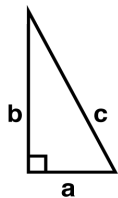


Equilateral Triangles

A Triangle with all three sides of equal length.

$$\text{Area} = \frac{\sqrt{3}}{4} \times (\text{side})^2 = \frac{\sqrt{3}}{4} s^2$$

$$\text{Perimeter} = 3 \times \text{sides} = 3s$$

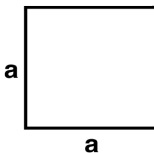


Right Triangles

A Triangle with one right angle.

$$\text{Area} = \frac{ba}{2}$$

$$\text{Perimeter} = a + b + c$$

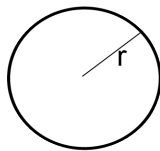


Square

A Square is a quadrilateral with four equal sides and angles at 90° .

$$\text{Area} = a^2$$

$$\text{Perimeter} = 4a$$



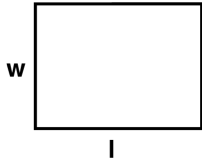
Circle

A circle has all points the same distance from the center

$$\text{Area} = \pi r^2$$

$$\text{Circumference} = 2\pi r$$

Area and Perimeter Formulas

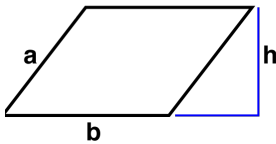


Rectangle

A Rectangle is a quadrilateral with four equal angles at 90° .

$$\text{Area} = lw$$

$$\text{Perimeter} = 2(w + l)$$

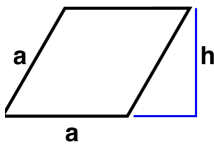


Parallelogram

A Parallelogram is a quadrilateral with opposite sides parallel.

$$\text{Area} = bh$$

$$\text{Perimeter} = 2(a + b)$$

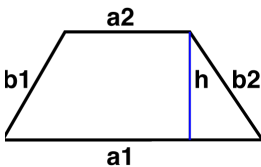


Rhombus

A Rhombus is a Parallelogram with all sides equal.

$$\text{Area} = ah$$

$$\text{Perimeter} = 4a$$

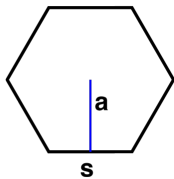


Trapezoid

A Trapezoid is a Quadrilateral with at least one pair of parallel sides.

$$\text{Area} = \frac{a1 + a2}{2} h$$

$$\text{Perimeter} = a1 + a2 + b1 + b2$$



Regular n-gon

A Regular Polygon is a polygon for which n sides and angles are equal.

$$\text{Area} = \frac{1}{2} (a n s)$$

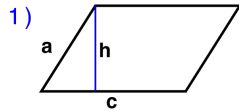
$$\text{Perimeter} = n s$$

WORKSHEET :



**Intro Geometry (Area,
Perimeter)**

Identify and Calculate the Area and Perimeter for each Quadrilateral.

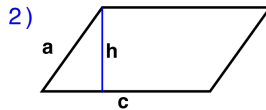


$a = 5.45 \text{ ft}$
 $c = 8.6 \text{ ft}$ $h = 5.1 \text{ ft}$

Area: _____

Perimeter: _____

Type: _____

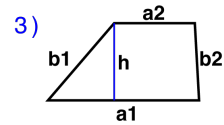


$a = 5.31 \text{ mm}$
 $c = 10 \text{ mm}$ $h = 5 \text{ mm}$

Area: _____

Perimeter: _____

Type: _____

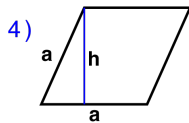


$a1 = 9 \text{ cm}$ $a2 = 4.8 \text{ cm}$
 $b1 = 6.06 \text{ cm}$ $b2 = 4.61 \text{ cm}$
 $h = 4.6 \text{ cm}$

Area: _____

Perimeter: _____

Type: _____

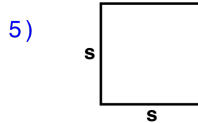


$a = 6.3 \text{ ft}$ $h = 5.76 \text{ ft}$

Area: _____

Perimeter: _____

Type: _____

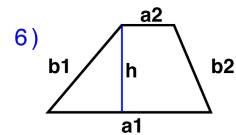


$s = 6 \text{ mm}$

Area: _____

Perimeter: _____

Type: _____

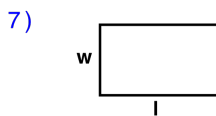


$a1 = 9.7 \text{ inches}$ $a2 = 3.1 \text{ inches}$
 $b1 = 6.81 \text{ inches}$ $b2 = 5.64 \text{ inches}$
 $h = 5.2 \text{ inches}$

Area: _____

Perimeter: _____

Type: _____

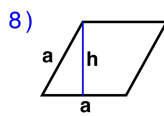


$l = 7 \text{ yds}$ $w = 4.2 \text{ yds}$

Area: _____

Perimeter: _____

Type: _____

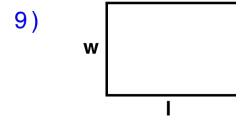


$a = 5 \text{ inches}$ $h = 4.37 \text{ inches}$

Area: _____

Perimeter: _____

Type: _____



$l = 7.8 \text{ cm}$ $w = 5.5 \text{ cm}$

Area: _____

Perimeter: _____

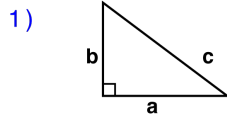
Type: _____

WORKSHEET :

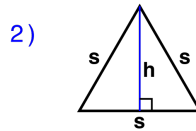


Intro Geometry (Area, Perimeter)

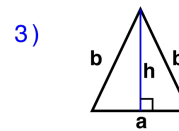
Identify and Calculate the Area and Perimeter for each Triangle.



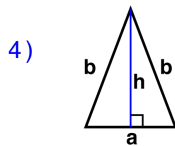
$a = 72 \text{ cm}$ $b = 54 \text{ cm}$
 $c = 90 \text{ cm}$
 Area: _____
 Perimeter: _____
 Type: _____



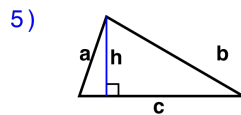
$s = 70 \text{ mm}$
 $h = 60.6 \text{ mm}$
 Area: _____
 Perimeter: _____
 Type: _____



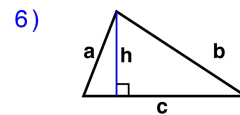
$a = 56 \text{ mm}$ $b = 68 \text{ mm}$
 $h = 60.6 \text{ mm}$
 Area: _____
 Perimeter: _____
 Type: _____



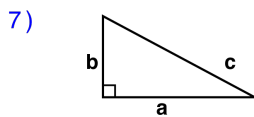
$a = 52 \text{ inches}$ $b = 79 \text{ inches}$
 $h = 72.2 \text{ inches}$
 Area: _____
 Perimeter: _____
 Type: _____



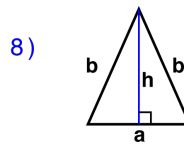
$a = 48.62 \text{ yds}$ $b = 91.65 \text{ yds}$
 $c = 95 \text{ yds}$ $h = 46 \text{ yds}$
 Area: _____
 Perimeter: _____
 Type: _____



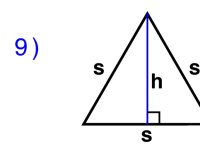
$a = 52.61 \text{ yds}$ $b = 89.47 \text{ yds}$
 $c = 94 \text{ yds}$ $h = 49 \text{ yds}$
 Area: _____
 Perimeter: _____
 Type: _____



$a = 88 \text{ cm}$ $b = 47 \text{ cm}$
 $c = 99.76 \text{ cm}$
 Area: _____
 Perimeter: _____
 Type: _____



$a = 59 \text{ ft}$ $b = 77 \text{ ft}$
 $h = 69.2 \text{ ft}$
 Area: _____
 Perimeter: _____
 Type: _____



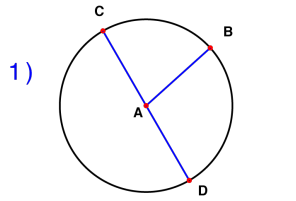
$s = 74 \text{ inches}$
 $h = 64.1 \text{ inches}$
 Area: _____
 Perimeter: _____
 Type: _____

WORKSHEET :

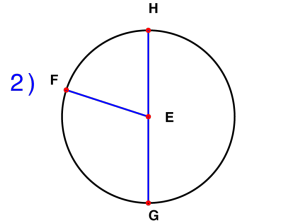


Intro Geometry (Area, Perimeter)

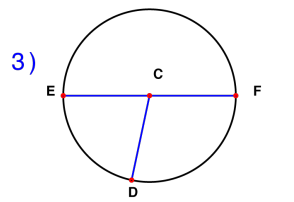
Solve the missing elements for each problem. Use 3.14 for π . Area = πr^2 ; C = πD



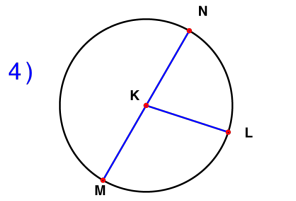
Radius: _____
 Diameter: 12 inches
 Circumference: _____
 Area: _____



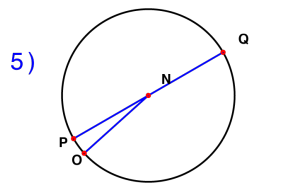
Radius: _____
 Diameter: 16 ft
 Circumference: _____
 Area: _____



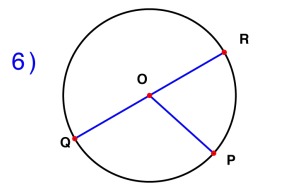
Radius: 9 cm
 Diameter: _____
 Circumference: _____
 Area: _____



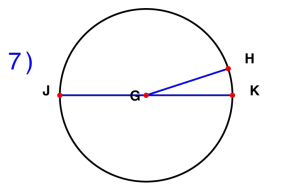
Radius: _____
 Diameter: 40 inches
 Circumference: _____
 Area: _____



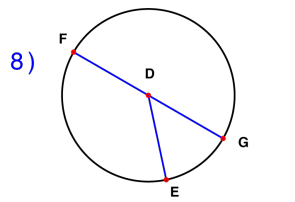
Radius: 16 ft
 Diameter: _____
 Circumference: _____
 Area: _____



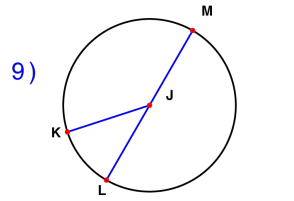
Radius: _____
 Diameter: 14 cm
 Circumference: _____
 Area: _____



Radius: _____
 Diameter: 36 inches
 Circumference: _____
 Area: _____



Radius: 19 ft
 Diameter: _____
 Circumference: _____
 Area: _____



Radius: 12 cm
 Diameter: _____
 Circumference: _____
 Area: _____

WORKSHEET :

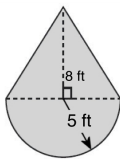


Intro Geometry (Area, Perimeter)

Compound Shapes

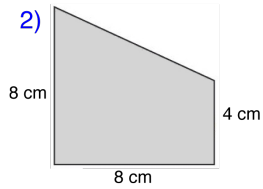
Find the area of each figure, round your answer to the nearest whole number if necessary.

1)



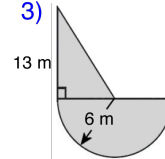
Area: _____

2)



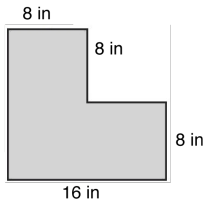
Area: _____

3)



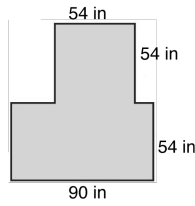
Area: _____

4)



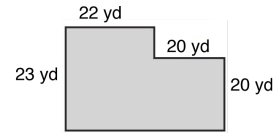
Area: _____

5)



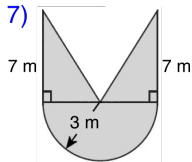
Area: _____

6)



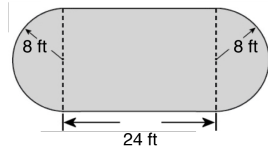
Area: _____

7)



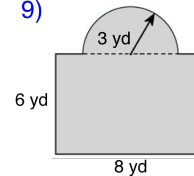
Area: _____

8)



Area: _____

9)



Area: _____

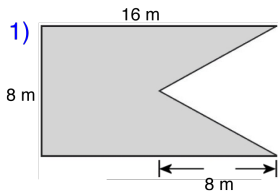
WORKSHEET :



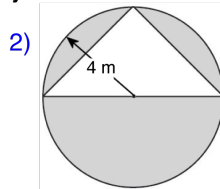
Intro Geometry (Area, Perimeter)

Compound Shapes

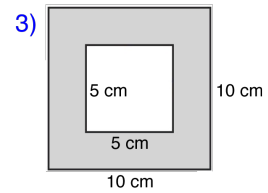
Find the area of each figure, round your answer to the nearest whole number if necessary.



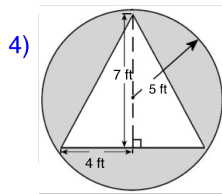
Area: _____



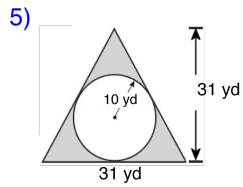
Area: _____



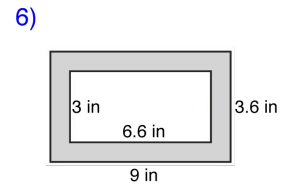
Area: _____



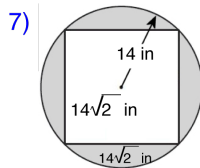
Area: _____



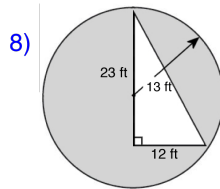
Area: _____



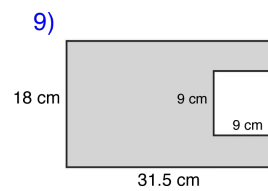
Area: _____



Area: _____



Area: _____



Area: _____

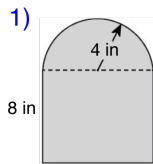
WORKSHEET :



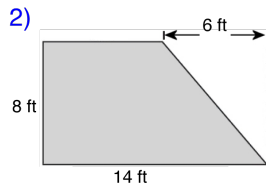
Intro Geometry (Area, Perimeter)

Compound Shapes

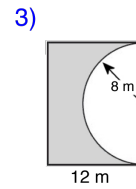
Find the area of each figure, round your answer to the nearest whole number if necessary.



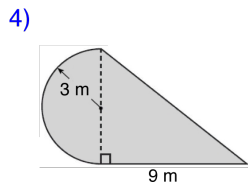
Area: _____



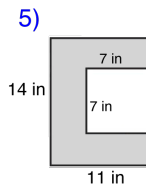
Area: _____



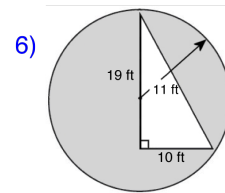
Area: _____



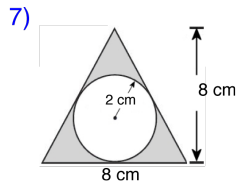
Area: _____



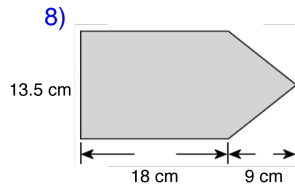
Area: _____



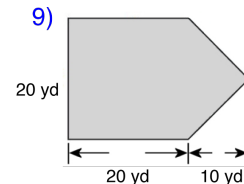
Area: _____



Area: _____



Area: _____



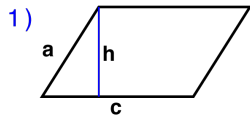
Area: _____

ANSWERS :



Intro Geometry (Area,
Perimeter)

Identify and Calculate the Area and Perimeter for each Quadrilateral.

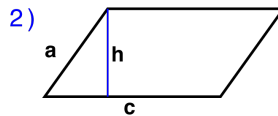


$a = 5.45 \text{ ft}$
 $c = 8.6 \text{ ft}$ $h = 5.1 \text{ ft}$

Area: 43.86 sq ft

Perimeter: 28.1 ft

Type: Parallelogram

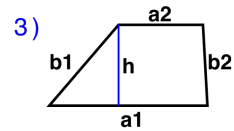


$a = 5.31 \text{ mm}$
 $c = 10 \text{ mm}$ $h = 5 \text{ mm}$

Area: 50 sq mm

Perimeter: 30.62 mm

Type: Parallelogram

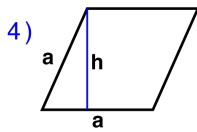


$a1 = 9 \text{ cm}$ $a2 = 4.8 \text{ cm}$
 $b1 = 6.06 \text{ cm}$ $b2 = 4.61 \text{ cm}$
 $h = 4.6 \text{ cm}$

Area: 31.74 sq cm

Perimeter: 24.47 cm

Type: Trapezoid

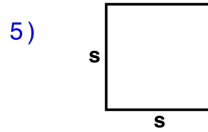


$a = 6.3 \text{ ft}$ $h = 5.76 \text{ ft}$

Area: 36.288 sq ft

Perimeter: 25.2 ft

Type: Rhombus

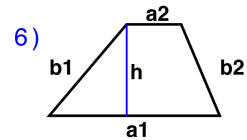


$s = 6 \text{ mm}$

Area: 36 sq mm

Perimeter: 24 mm

Type: Square

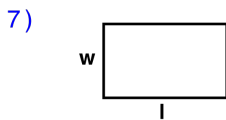


$a1 = 9.7 \text{ inches}$ $a2 = 3.1 \text{ inches}$
 $b1 = 6.81 \text{ inches}$ $b2 = 5.64 \text{ inches}$
 $h = 5.2 \text{ inches}$

Area: 33.28 sq inches

Perimeter: 25.25 inches

Type: Trapezoid

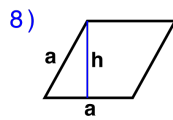


$l = 7 \text{ yds}$ $w = 4.2 \text{ yds}$

Area: 29.4 sq yds

Perimeter: 22.4 yds

Type: Rectangle

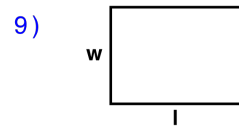


$a = 5 \text{ inches}$ $h = 4.37 \text{ inches}$

Area: 21.85 sq inches

Perimeter: 20 inches

Type: Rhombus



$l = 7.8 \text{ cm}$ $w = 5.5 \text{ cm}$

Area: 42.9 sq cm

Perimeter: 26.6 cm

Type: Rectangle

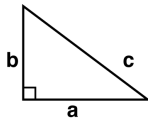
ANSWERS :



Intro Geometry (Area, Perimeter)

Identify and Calculate the Area and Perimeter for each Triangle.

1)



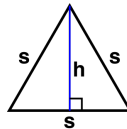
$a = 72 \text{ cm}$ $b = 54 \text{ cm}$
 $c = 90 \text{ cm}$

Area: 1944 sq cm

Perimeter: 216 cm

Type: Right Triangle

2)



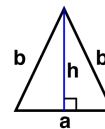
$s = 70 \text{ mm}$
 $h = 60.6 \text{ mm}$

Area: 2121 sq mm

Perimeter: 210 mm

Type: Equilateral Triangle

3)



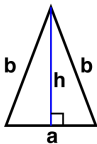
$a = 56 \text{ mm}$ $b = 68 \text{ mm}$
 $h = 60.6 \text{ mm}$

Area: 1696.8 sq mm

Perimeter: 192 mm

Type: Isosceles Triangle

4)



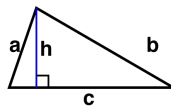
$a = 52 \text{ inches}$ $b = 79 \text{ inches}$
 $h = 72.2 \text{ inches}$

Area: 1877.2 sq inches

Perimeter: 210 inches

Type: Isosceles Triangle

5)



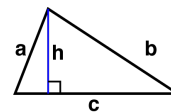
$a = 48.62 \text{ yds}$ $b = 91.65 \text{ yds}$
 $c = 95 \text{ yds}$ $h = 46 \text{ yds}$

Area: 2185 sq yds

Perimeter: 235.27 yds

Type: Common Triangle

6)



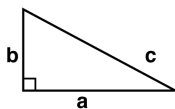
$a = 52.61 \text{ yds}$ $b = 89.47 \text{ yds}$
 $c = 94 \text{ yds}$ $h = 49 \text{ yds}$

Area: 2303 sq yds

Perimeter: 236.08 yds

Type: Common Triangle

7)



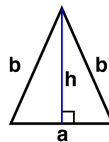
$a = 88 \text{ cm}$ $b = 47 \text{ cm}$
 $c = 99.76 \text{ cm}$

Area: 2068 sq cm

Perimeter: 234.76 cm

Type: Right Triangle

8)



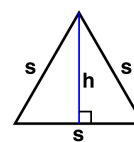
$a = 59 \text{ ft}$ $b = 77 \text{ ft}$
 $h = 69.2 \text{ ft}$

Area: 2041.4 sq ft

Perimeter: 213 ft

Type: Isosceles Triangle

9)



$s = 74 \text{ inches}$
 $h = 64.1 \text{ inches}$

Area: 2371.7 sq inches

Perimeter: 222 inches

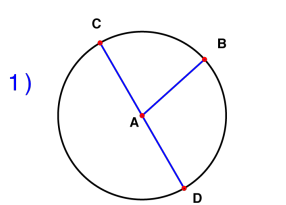
Type: Equilateral Triangle

ANSWERS :

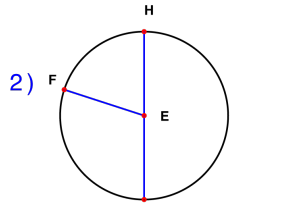


Intro Geometry (Area,
Perimeter)

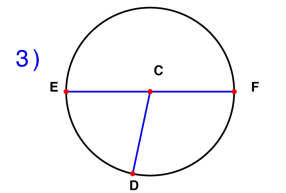
Solve the missing elements for each problem. Use 3.14 for π . Area = πr^2 ; $C = \pi D$



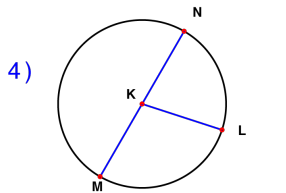
Radius: 6 inches
 Diameter: 12 inches
 Circumference: 37.68 inches
 Area: 113.04 inches



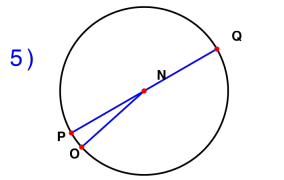
Radius: 8 ft
 Diameter: 16 ft
 Circumference: 50.24 ft
 Area: 200.96 ft



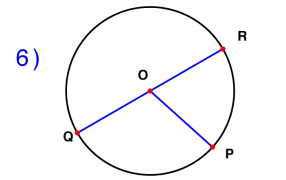
Radius: 9 cm
 Diameter: 18 cm
 Circumference: 56.52 cm
 Area: 254.34 cm



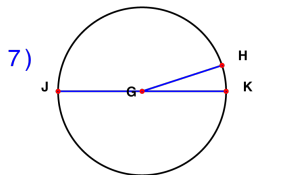
Radius: 20 inches
 Diameter: 40 inches
 Circumference: 125.6 inches
 Area: 1256 inches



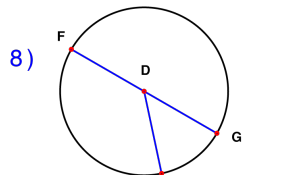
Radius: 16 ft
 Diameter: 32 ft
 Circumference: 100.48 ft
 Area: 803.84 ft



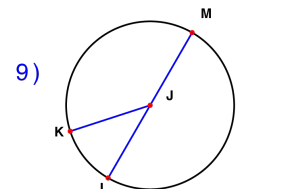
Radius: 7 cm
 Diameter: 14 cm
 Circumference: 43.96 cm
 Area: 153.86 cm



Radius: 18 inches
 Diameter: 36 inches
 Circumference: 113.04 inches
 Area: 1017.36 inches



Radius: 19 ft
 Diameter: 38 ft
 Circumference: 119.32 ft
 Area: 1133.54 ft



Radius: 12 cm
 Diameter: 24 cm
 Circumference: 75.36 cm
 Area: 452.16 cm

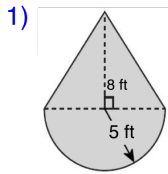
ANSWERS :



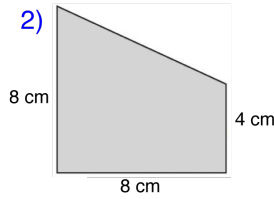
Intro Geometry (Area, Perimeter)

Compound Shapes

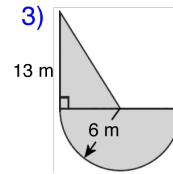
Find the area of each figure, round your answer to the nearest whole number if necessary.



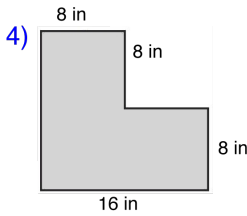
Area: 79 ft²



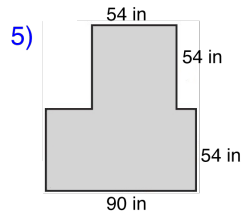
Area: 48 cm²



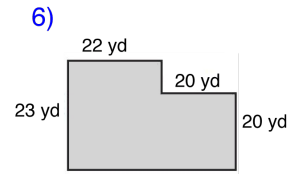
Area: 96 m²



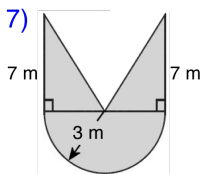
Area: 192 in²



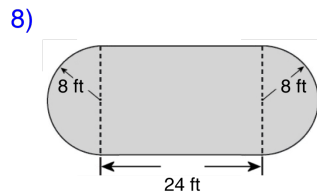
Area: 7776 in²



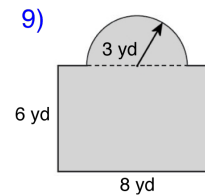
Area: 906 yd²



Area: 35 m²



Area: 585 ft²



Area: 62 yd²

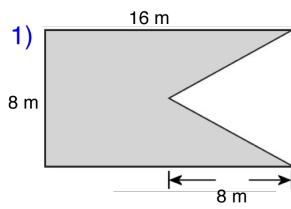
ANSWERS :



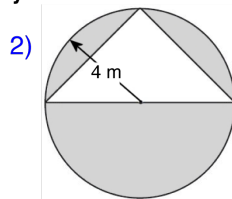
Intro Geometry (Area, Perimeter)

Compound Shapes

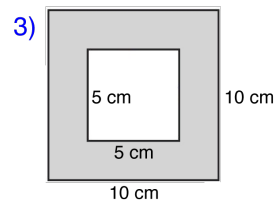
Find the area of each figure, round your answer to the nearest whole number if necessary.



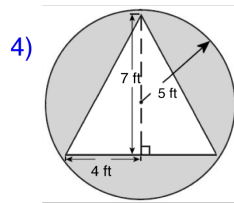
Area: 96 m²



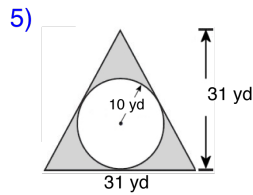
Area: 34 m²



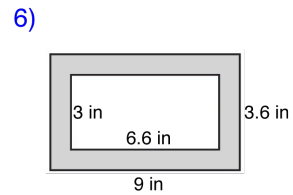
Area: 75 cm²



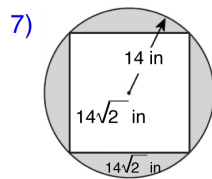
Area: 51 ft²



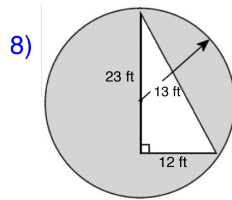
Area: 166 yd²



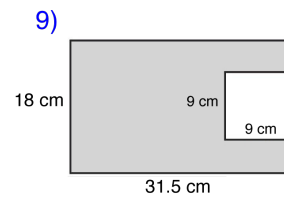
Area: 13 in²



Area: 224 in²



Area: 393 ft²



Area: 486 cm²

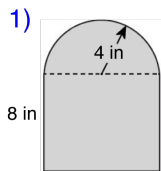
ANSWERS :



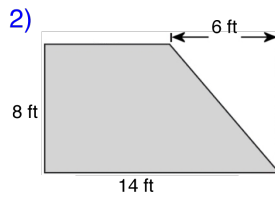
Intro Geometry (Area, Perimeter)

Compound Shapes

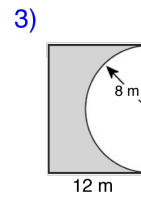
Find the area of each figure, round your answer to the nearest whole number if necessary.



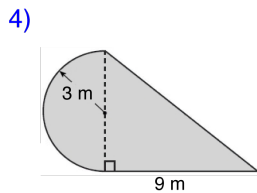
Area: 89 in²



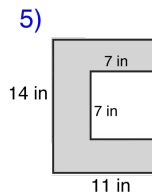
Area: 88 ft²



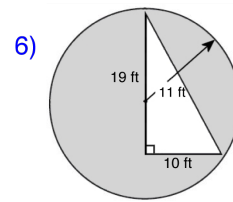
Area: 91 m²



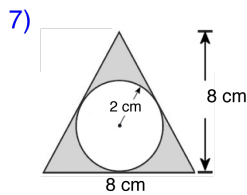
Area: 41 m²



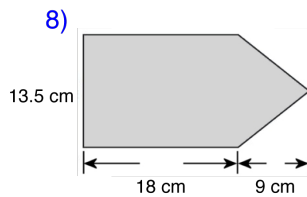
Area: 105 in²



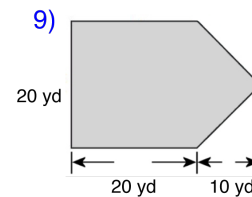
Area: 285 ft²



Area: 19 cm²



Area: 304 cm²



Area: 500 yd²

KEY CONCEPTS:

Learn the basic concepts of area and perimeter(circumference) applied to the basic shapes; triangle, circle, quadrilaterals(square, rectangle, trapezoid, and parallelogram).

- 1.** Memorize the formulas for area and perimeter of each of the above shapes and be able to calculate both values given the appropriate inputs.
- 2.** Be able to derive the combined area of combinations of shapes added together.
- 3.** Be able to derive the net area of combinations of shapes subtracted from each other.
i.e. find the shaded area by subtracting inner shape from outer shape area.