

GEOMETRIC FORMULAS

FORMULAS

RECTANGLE

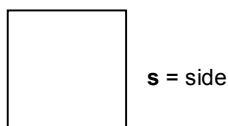


L = length

$$\text{Perimeter} = 2L + 2W$$

$$\text{Area} = L \times W$$

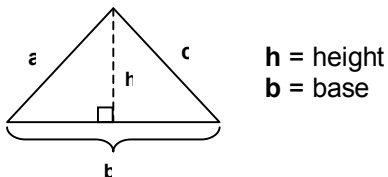
SQUARE



$$\text{Perimeter} = 4 \cdot s$$

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

TRIANGLE

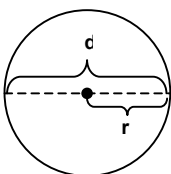


h = height
b = base

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

$$\text{Area} = \frac{1}{2}bh$$

CIRCLE



d = diameter
r = radius

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

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

PRACTICE PROBLEMS

- 1) Find the perimeter and the area of a rectangle when the length is 23 yards and the width is 16 yards.
- 2) A rectangular garden has a length of 18 feet and a width of 12 feet. a) How much fencing would you need to enclose the garden? b) If fencing costs \$6.50 a foot, how much would the fence cost? c) If a bag of fertilizer covers 75 square feet, how many bags would you need to fertilize the garden?
- 3) Find the perimeter and the area of a square when the side measures 7.6 miles.
- 4) On a baseball field, the distance between each base is 90 feet. a) How far does a batter run if he hits a double, steals third and reaches home on an error? b) How much sod does a groundkeeper need to cover the field inside the baselines?
- 5) Find the perimeter of a triangle with sides that measure $(6x)$ feet, $(4x + 5)$ feet, and 12 feet.
- 6) Find the area of the triangle when the base is 8.4 meters and the height is 4.5 meters.
- 7) Find the circumference of a circle with a radius of 0.6 cm. Use $\pi = 3.14$.
- 8) If the diameter of a circle is 9 inches, what is the area of the circle? Use $\pi = 3.14$.
- 9) A local pizza shop sells two small 10-inch pizzas or one large 16-inch pizza for the same price. Which of these options is the better buy?



Answers: 1) perimeter: 78 yd.; area: 368 sq. yd.; 2) a) 60 ft. b) \$390 c) 3 bags; 3) 6 sq. ft.; 4) perimeter: 30.4 mi.; area: 57.76 sq. mi.; 5) a) 360 ft. b) 8100 sq. ft.; 6) $(10x + 17)$ ft.; 7) 3.768 cm; 8) 63.585 sq. in.; 9) The large pizza is the better buy. The area of one small pizza is 25π sq. in. Two small pizzas have an area of 50π sq. in. The area of the large pizza is 64π sq. in.