

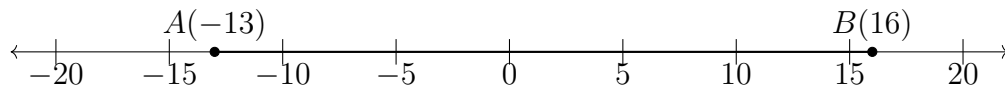
Name:

1.12 Test: Length and area

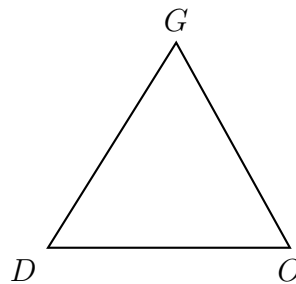
Show units if given. Show calculation as an equation, starting with a capitalized variable.

HSG.MG.A.1 Use geometric shapes, measures, and properties to describe objects

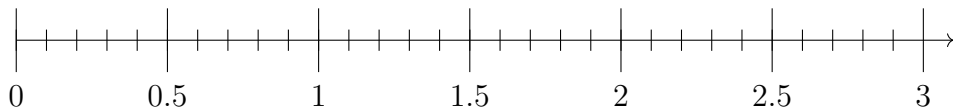
1. Points $A = -13$ and $B = 16$ are shown below. Find the length of segment \overline{AB} .



2. Isosceles $\triangle DOG$ has congruent sides $\overline{DO} \cong \overline{DG}$. Mark the congruencies with tick marks on the diagram.



3. Mark and label irrational number $\sqrt{2} = 1.41421356\dots$ on the number line below.



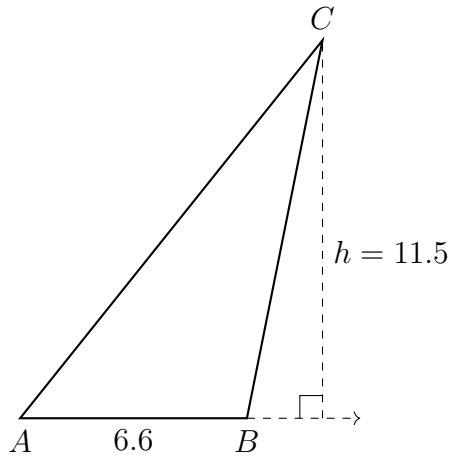
GPE.B.7 Compute perimeters and areas of triangles and rectangles

4. Measure and mark the lengths of the sides of the rectangle in centimeters. Find its area.

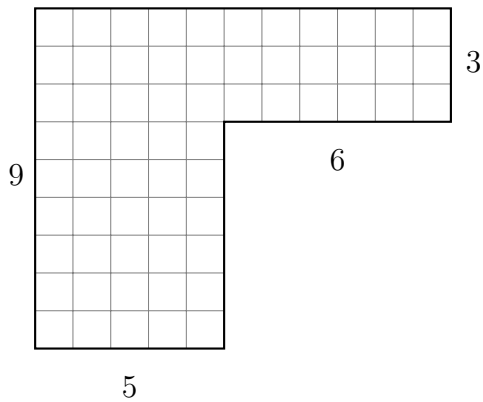


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5. Find the area of the triangle ABC . The \triangle 's height is $h = 11.5$ and its base measures $AB = 6.6$.



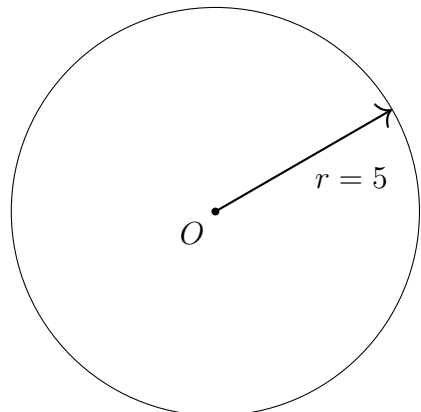
6. Find the area of the compound rectangular shape. Show the calculation as the sum of two rectangles.



7. Given the circle O with radius $r = 5$. Leave exact answers, in terms of π .

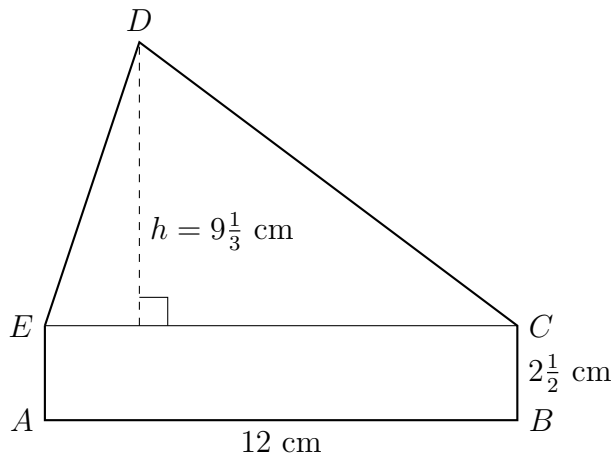
(a) Find the circumference of circle A .

(b) Find the area of the circle.



Name:

8. A triangle with 12 centimeter base and $9\frac{1}{3}$ cm height lies on top of a rectangle with the same base $AB = 12$ cm and a width of $2\frac{1}{2}$ cm. Find the area of the combined figure.



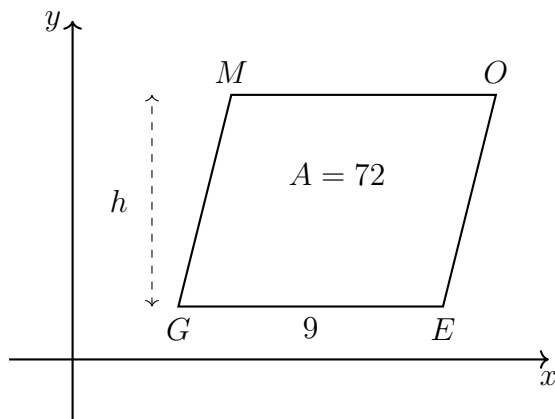
HSN.Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

9. Round each value to the *nearest thousandth*.
- (a) 2π (b) $\sqrt{3}$
10. Find the height in meters of a person 61 inches tall. Round to the *nearest hundredth of a meter* (i.e. nearest centimeter). 1 meter equals 39.37 inches.
11. A palindrome is a word, phrase, or number that reads the same backwards and forwards. (e.g. “level”, “racecar”). Find the % error in this palindromic approximation of pi.

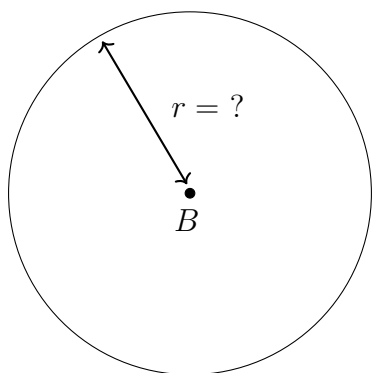
$$\pi \approx \frac{666}{212}$$

HSA.CED.A.1 Create equations in one variable and use them to solve problems.

12. The parallelogram $GEOM$ has an area $A = 72$ and base $GE = 9$. Find its height h .



13. The circle B has an area of $A = 36\pi$ square centimeters. Find the radius r .



Start with the formula

$$A = \pi r^2 = 36\pi$$

14. Given \overline{PQR} , with $PQ = 2x + 4$, $QR = x + 3$, and $PR = 22$. Find PQ . (show check)

