Unit 1: Segments, length, and area

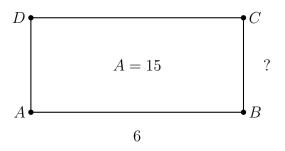
19 Sept 2022

Name:

## 1.9 Rounding and circle area

1. Rectangle ABCD has area A=15 and base b=6 but unknown height. Write an equation then solve. Start with this form (for the unknown, use h, x, or BC) and state your answer as a fraction:

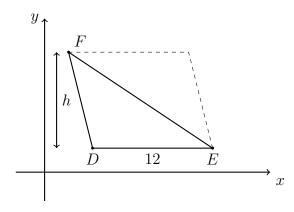
 $A = b \times h = 15$ 



2. The  $\triangle DEF$  has an area A=54 and base DE=12.

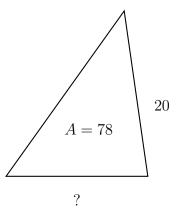
Find its height, starting with an equation.

$$A = \frac{1}{2}bh = 54$$



3. Find the length of the base of a triangle with area A = 78 and height h = 20. Express your result as a decimal. Start with the form (use b or x):

$$A = \frac{1}{2} \times b \times h = 78$$

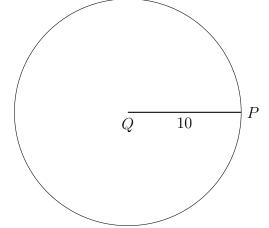


4. Find the area of the given circle Q with radius r=10 centimeters.

Start with the formula

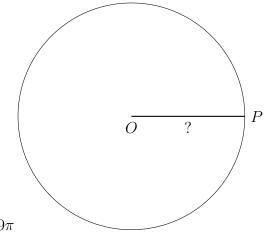
$$A=\pi r^2$$

(a) State the area in terms of  $\pi$ 

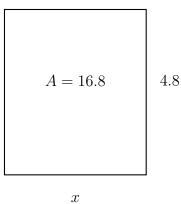


- (b) Now round to the nearest hundredth
- 5. Given circle O with area  $A = 49\pi$  square centimeters.

Find the radius of circle, OP. Start with the formula



- $A=\pi r^2=49\pi$
- 6. Find the base of a rectangle with area A = 16.8 and height h = 4.8, expressed as a decimal. First write an equation substituting the given values in the area formula.

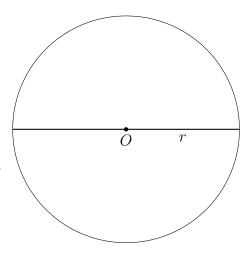


7. Find the radius and circumference of circle O with diameter D=14 centimeters.

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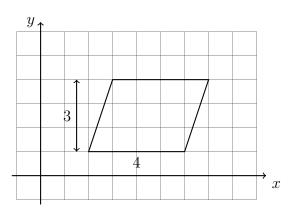
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- (a) Write down the radius.
- (b) State the circumference in terms of  $\pi$
- (c) Express the circumference as a decimal, rounding to the nearest tenth.



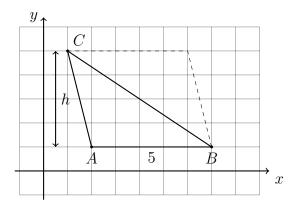
8. A parallelogram is shown on the x-y plane having a base b=4 and height h=3.

Find its area, showing the calculation.



9. The  $\triangle ABC$  is shown below with A(2,1), B(7,1), and C(1,5). The length of the base of the triangle is AB = 5.

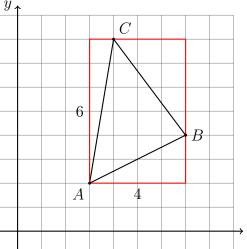
(a) Find the height h.



(b) Find its area, showing the calculation.

- 10. Spicy: Find the area of the  $\triangle ABC$  is shown below with A(3,2), B(7,4), and C(4,8).
  - (a) First find the area of the red rectangle with sides b = 4, h = 6.





- (b) Find the area of the three triangles surrounding  $\triangle ABC$  in the rectangle.
- (c) Subtract their areas from the rectangle to find  $A_{\triangle ABC}$