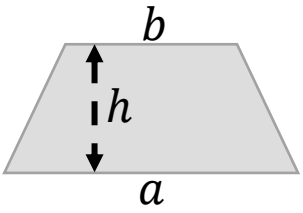
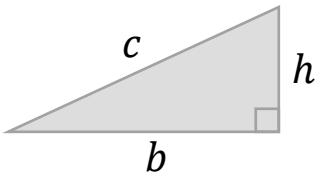
Sharing in a Ratio – Area and Perimeter

A trapezium has area A, parallel sides a and b, and height h. Find:



1. The area, if $h = 12$ cm and $\boldsymbol{a : b : h = 5 : 4 : 3}$.

2. The height, if $\boldsymbol{A : a : b = 540 : 2 : 3}$ and b is 20 cm longer than a.

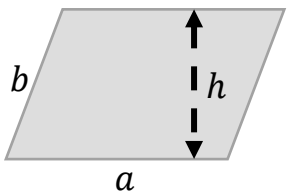


A right-angled triangle has area A, perimeter P, and sides b, c, and h. Find:

3. The area, if the perimeter is 72 cm and $\boldsymbol{b : c : h = 4 : 5 : 3}$.

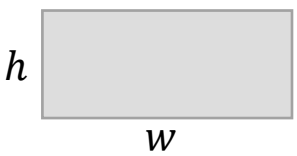
4. The size of the smallest angle, if the angles are in the ratio $\boldsymbol{6 : 19 : 25}$.

A parallelogram has area A, perimeter P, height h, and sides a and b. Find:



5. The ratio $\boldsymbol{a : b : P}$, if the area is 40 m^2, and a is 6 m longer than h and 5 m longer than b.

6. The value of h, if $\boldsymbol{b : P : h = 75 : 1400 : 54}$ and the area is 54 m^2.

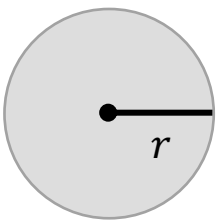


For a rectangle with width w cm, height h cm, area A cm^2, and perimeter P cm find:

7. The area, if $P = 84$ and the ratio of w to h is $\boldsymbol{6 : 1}$.

8. The perimeter, if the area is 0.25 cm^2 and the ratio $\boldsymbol{A : w = 1 : 3}$. Leave your answer as a mixed number.

A circle has area A m^2, circumference C m, and radius r m. Find:



9. The radius, if the ratio $\boldsymbol{r : A = 14 : 95}$.

10. The diameter, if the ratio $\boldsymbol{C : A = 1 : 54}$.