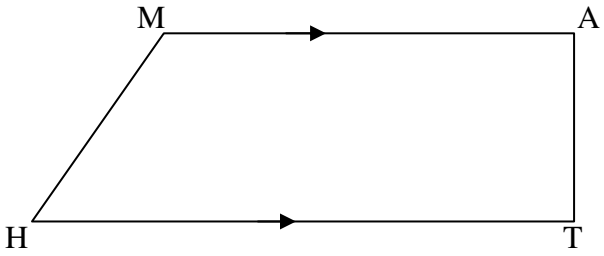
Working with Trapezoids

Use trapezoid MATH to answer the following questions:



1. Name the bases of the trapezoid:

2. Name the legs of the trapezoid:

3. Name both pairs of base angles:

4. Draw the median of the trapezoid, label it $\overline{PQ}$.

5. Write the equation that relates the measure of the median of a trapezoid, *m*, to the measures of the bases, *a* and *b*.

6. If MA = 30 and HT = 42, find PQ.

7. If PQ = 14 and MA = 14, find HT.

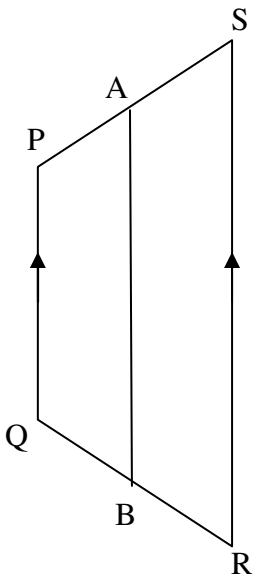
8. If MA = $6x - 3$ and HT = $8x + 5$ and PQ = 15, find the value of *x*.

Create your own diagram to show the following:

9. Draw isosceles trapezoid ABCD.
10. Mark the parallel sides.
11. Mark the congruent sides.
12. On a second copy of ABCD, draw the median, name it $\overline{MN}$, and show the new congruent parts.

Use isosceles trapezoid PQRS to answer the following:

13. If m∠S = 65, find m∠P, m∠R, and m∠Q. Explain why each angle has the measure you indicated.



14. If $\overline{AB}$ is the median of PQRS, label the congruent segments.

15. If PA = 5g and SA = g + 12, find the value of g and find the measure of PS. Give a reason for what you did.

16. If AB = 60, PQ = 4x – 1, and SR = 6x + 11, find the value of x. Then, find PQ and find SR. Give reasons for each answer.