

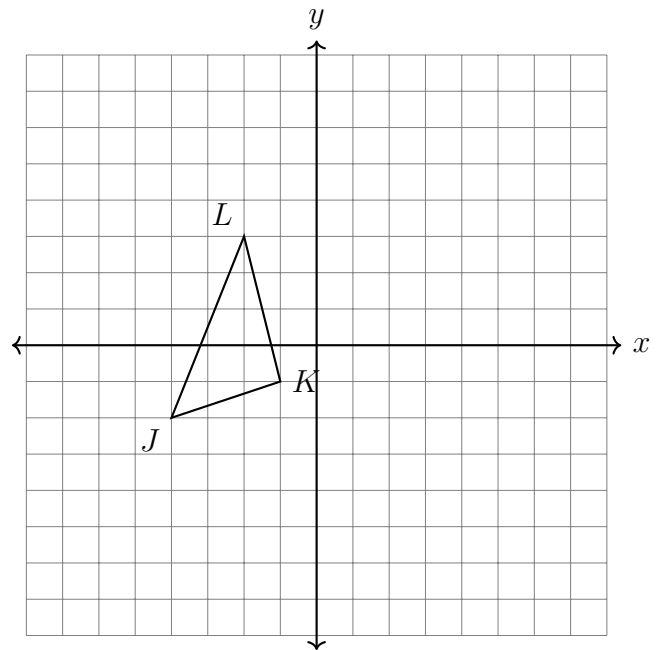
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7.5 Extension: Prior topics review

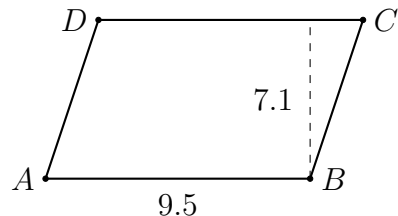
CCSS.HSG.CO.A.5

1. The vertices of $\triangle JKL$ have the coordinates $J(-4, -2)$, $K(-1, -1)$, and $L(-2, 3)$, as shown below.

Apply a translation of $(x, y) \rightarrow (x - 3, y + 2)$ to $\triangle JKL$ and then reflect the image across the y -axis. Draw both images $\triangle J'K'L'$ and $\triangle J''K''L''$ on the set of axes below, labeling the vertices.

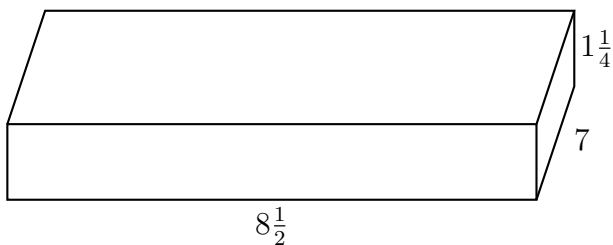


2. Find the area of the parallelogram $ABCD$ shown below, with $AB = 9.5$ and height $h = 7.1$.



3. The measures in degrees of the three angles of a triangle are $3x$, $\frac{1}{2}x + 7$, and $5x - 65$. Find x .

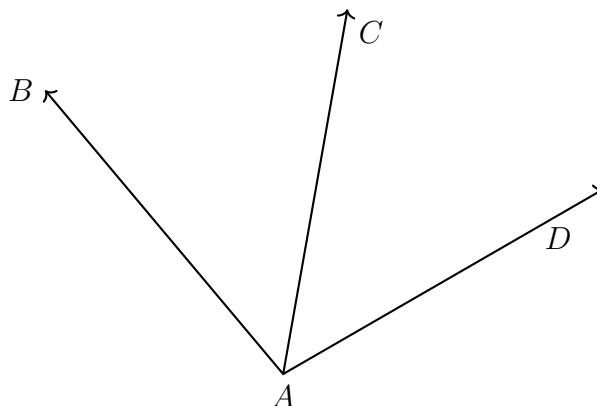
4. A wooden cutting board is $8\frac{1}{2}$ inches long, 7 inches wide, and $1\frac{1}{4}$ inches thick. Find the volume of the box. Show the calculation.



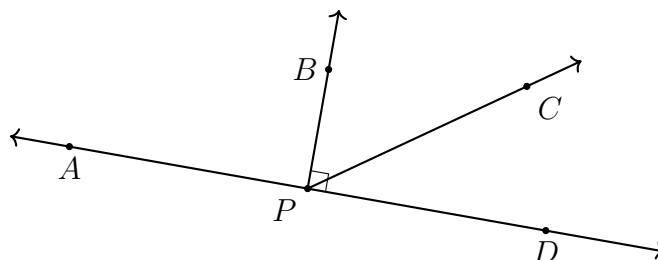
5. Of two complementary angles, the measure of $\angle A$ is two times that of $\angle B$. Find $m\angle A$.
First write an equation for full credit.

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6. An angle bisector is shown below, with \overrightarrow{AC} bisecting $\angle BAD$. Given $m\angle BAC = 6x - 5$ and $m\angle BAD = 9x + 17$, find $m\angle BAD$. (Show check)



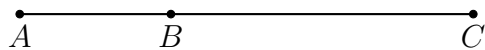
7. Angles APC and CPD form a linear pair. $m\angle APC = 10x - 10$ and $m\angle CPD = 3x - 5$. Find $m\angle CPD$. Check your answer for full credit.



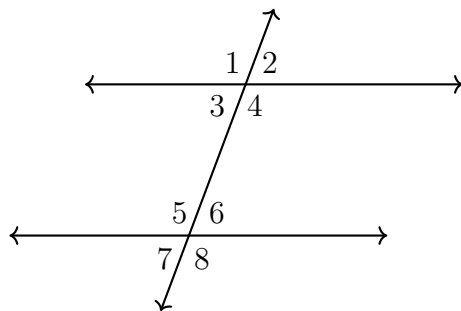
Do Not Solve!

Model the situation with an equation in terms of x .

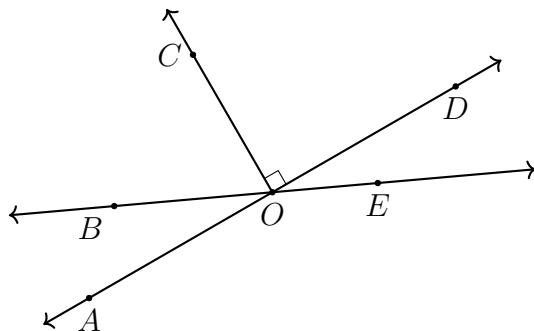
8. Given \overline{ABC} , with $AB = 2x - 1$, $BC = 3x + 7$, and $AC = 21$. Find x .



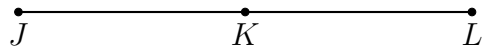
9. Given $m\angle 3 = x + 35$ and $m\angle 5 = 4x - 25$. Find x .



10. In the diagram below $m\angle AOB = 6x + 5$ and $m\angle COB = 8x + 15$. Find x .



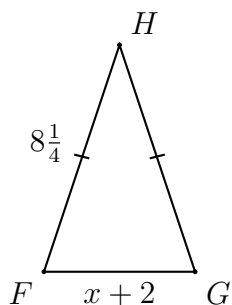
11. The point K is the midpoint of \overline{JL} , $JK = 3x + 15$, and $JL = 9x + 9$. Find x .



12. The perimeter of the isosceles $\triangle FGH$ is $19\frac{1}{2}$ with $\overline{FH} \cong \overline{GH}$. If $FG = x + 2$ and $FH = 8\frac{1}{4}$, find x .

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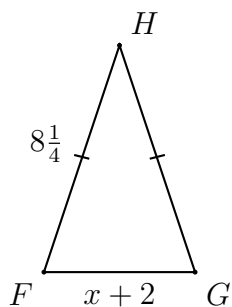
Show your work with an equation.



Write the value of x in the box.

13. The perimeter of the isosceles $\triangle FGH$ is $19\frac{1}{2}$ with $\overline{FH} \cong \overline{GH}$. If $FG = x + 2$ and $FH = 8\frac{1}{4}$, find x .

Show your work with an equation.



Write the value of x in the box.