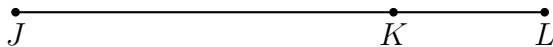


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### 4.3 Homework: Angle review

1. Given  $\overline{JKL}$ ,  $JK = 5.4$ , and  $KL = 1.1$ . Find  $JL$ .

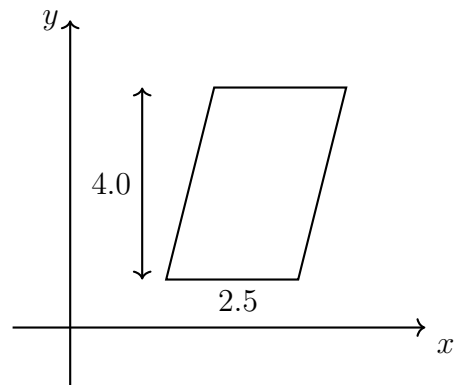
Show your work by marking the diagram and writing an equation.



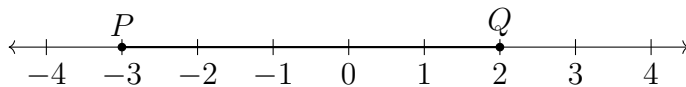
Write your final answer  
in the box on all problems.

2. A parallelogram is shown on the  $x$ - $y$  plane having a base  $b = 2.5$  and height  $h = 4.0$ .

Find its area, showing the calculation.



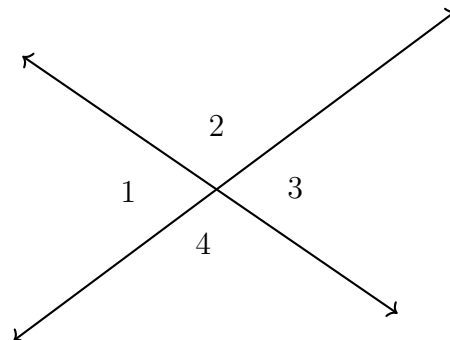
3. Subtract to find the length between  $P(-3)$  and  $Q(2)$ . Take the absolute value if necessary since lengths are positive numbers.



4. As shown below, two lines intersect making four angles:  $\angle 1$ ,  $\angle 2$ ,  $\angle 3$ , and  $\angle 4$ .

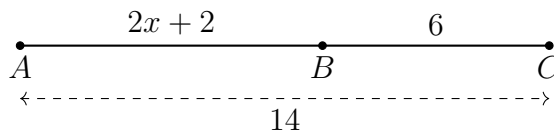
Given  $m\angle 2 = 105^\circ$ .

(a) Find  $m\angle 3$



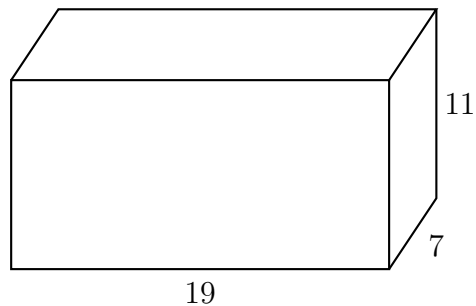
(b) Find  $m\angle 4$

5. Given  $\overline{ABC}$ ,  $AB = 2x + 2$ ,  $BC = 6$ ,  $AC = 14$ . Find  $x$ .



6. Find the volume of a rectangular prism (box). Its length is  $l = 19$  inches, its height  $h = 11$  inches, and depth is  $w = 7$  inches. Start with the equation

$$V = l \times w \times h$$

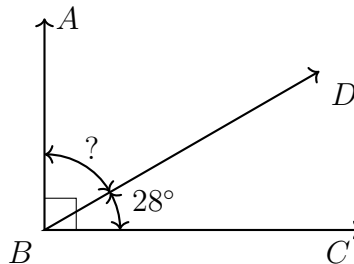


Do not write units in the box,  
just the value.

7. Apply the Angle Addition postulate. Write an equation to support your work.

Given  $m\angle CBD = 28^\circ$ ,  $m\angle ABC = 90^\circ$ .

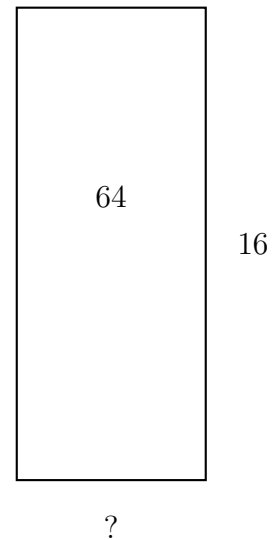
Find  $m\angle ABD$ .



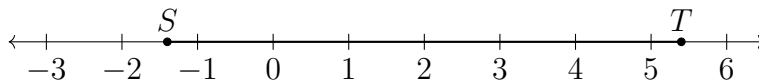
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8. Find the length of the base of a rectangle with area  $A = 64$  and height  $h = 16$ . Start with the form (use  $b$  or  $x$ ):

$$A = b \times h = 64$$



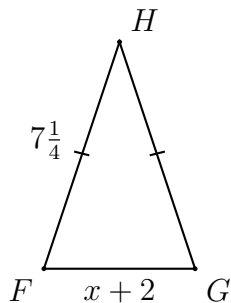
9. Given  $S(-1.4)$  and  $T(5.4)$ , as shown on the number line.  
 Mark and label the midpoint  $M$  that bisects  $\overline{ST}$ .



Write the value of  $M$  in the box.

10. The perimeter of the isosceles  $\triangle FGH$  is  $18\frac{1}{2}$  with  $\overline{FH} \cong \overline{GH}$ . If  $FG = x + 2$  and  $FH = 7\frac{1}{4}$ , find  $x$ .

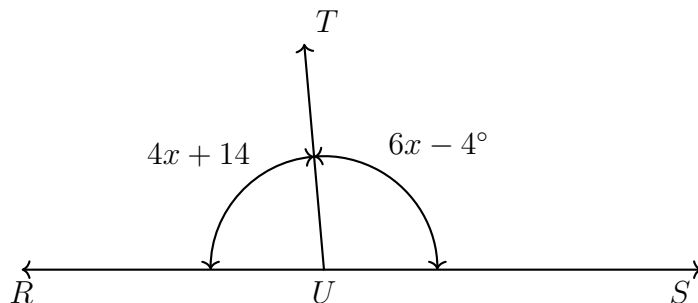
Show your work with an equation.



Write the value of  $x$  in the box.

11. A linear pair is formed by two angles,  $m\angle RUT = 4x + 14$  and  $m\angle SUT = 6x - 4^\circ$ .

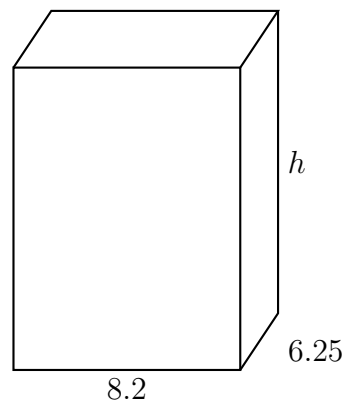
Write an equation, then solve for  $x$ .



12. The rectangular prism shown has a volume of  $V = 615$  cubic feet. Its base measures  $l = 8.2$  feet by  $w = 6.25$  feet.

Find its height. Begin by writing the following formula with values substituted:

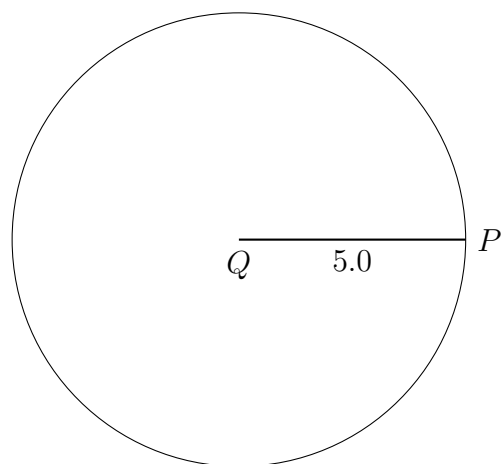
$$V = l \times w \times h = 615$$



13. Find the area of circle  $Q$  with radius  $r = 5.0$  centimeters, rounded to the *nearest tenth*. Start with the formula

$$A = \pi r^2$$

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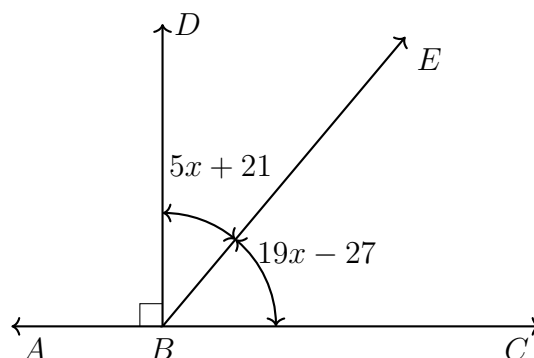


14. In the diagram shown,  $\overrightarrow{BD} \perp \overrightarrow{ABC}$  and angle measures are given.

Find  $x$ .

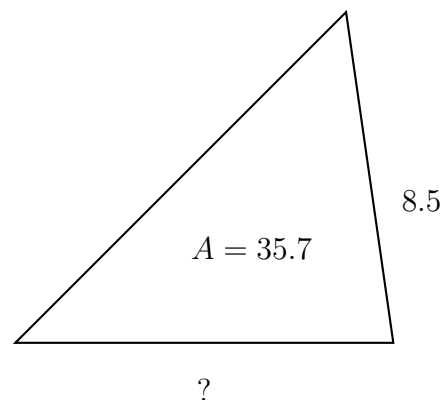
$$m\angle DBE = 5x + 21^\circ$$

$$m\angle EBC = 19x - 27^\circ$$



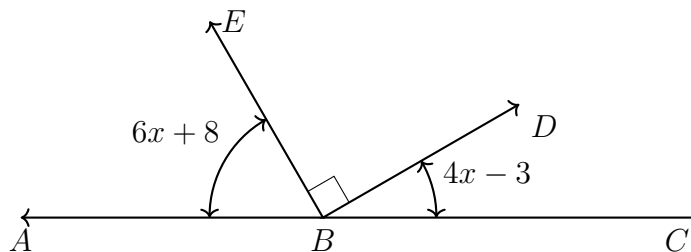
15. Find the length of the base of a triangle with area  $A = 35.7$  and height  $h = 8.5$ . Express your result as a decimal. Start with the form (use  $b$  or  $x$ ):

$$A = \frac{1}{2} \times b \times h = 35.7$$



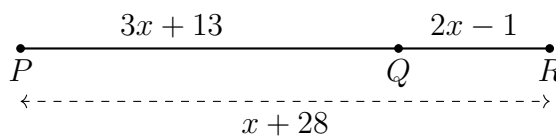
16. Given  $\overrightarrow{ABC}$ , right angle  $\angle DBE$ ,  $m\angle ABE = 6x + 8$ , and  $m\angle DBC = 4x - 3$ .

Find  $x$ .



Write the value of  $x$  as a decimal.

17. Given  $\overline{PQR}$ ,  $PQ = 3x + 13$ ,  $QR = 2x - 1$ ,  $PR = x + 28$ . Find  $x$ .



18. Ray  $\overrightarrow{BF}$  is the angle bisector of  $\angle ABC$ . Given that the angle measures are  $m\angle ABF = 8x - 14$  and  $m\angle CBF = 6x + 8$ .

Find  $x$ .

