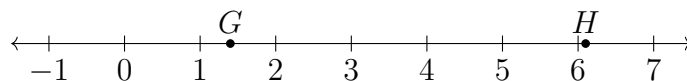


Name:

5.6 Exam review: Create equations to solve problems

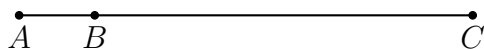
HSA.CED.A1

1. Find GH , given $G = 1.4$ and $H = 6.1$.

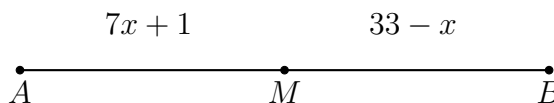


2. Given \overline{ABC} , $AB = \frac{2}{3}$, and $AC = 3\frac{1}{3}$.

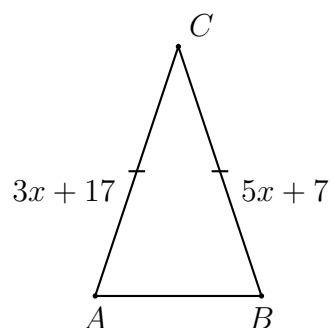
Find BC .



3. Given M is the midpoint of \overline{AB} , $AM = 7x + 1$, $MB = 33 - x$. Find x .

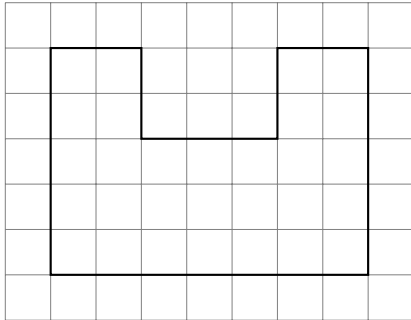


4. Given isosceles $\triangle ABC$ with $\overline{AC} \cong \overline{BC}$. $AC = 5x + 7$ and $BC = 3x + 17$. Find AC .

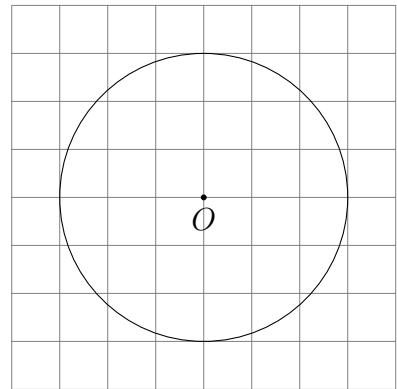


Compute areas and perimeters**HSG.GPE.B.7**

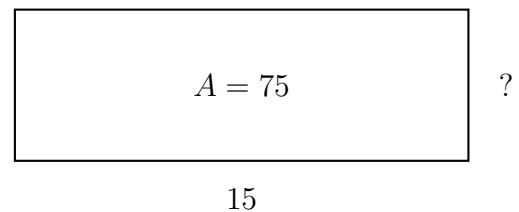
5. Find the area A of the shape shown below in terms of unit squares.



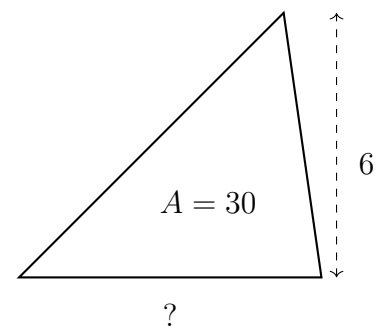
6. Given the circle O with radius $r = 3$. Find the area of the circle in terms of π .



7. Find the width of a rectangle with area $A = 75$ and length $l = 15$.



8. Find the length of the base of a triangle with area $A = 30$ and height $h = 6$.

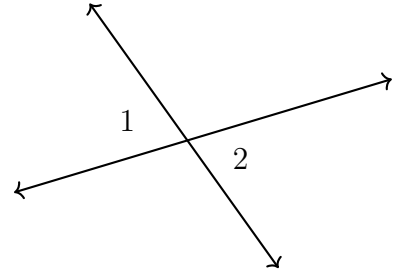


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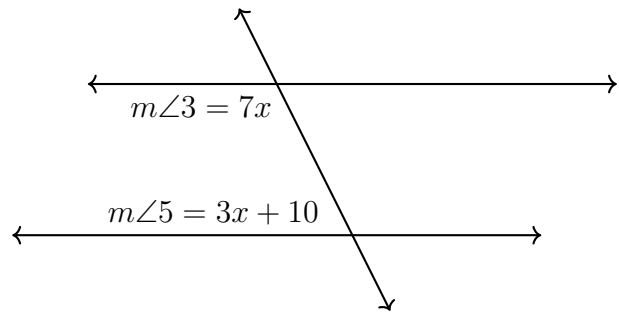
Solve equations in one variable

8.EE.C.7

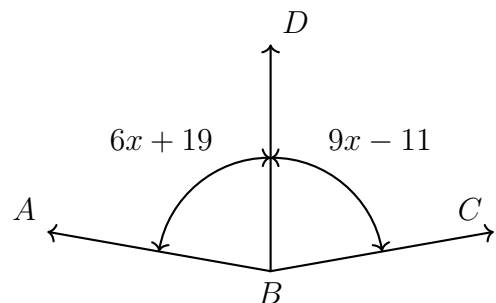
9. Given two vertical angles as shown, $m\angle 1 = 2x - 30$, and $m\angle 2 = x + 20$. Find x .



10. Given two parallel lines and a transversal, with same-side interior angles $m\angle 3 = 7x$ and $m\angle 5 = 3x + 10$. Solve for x .



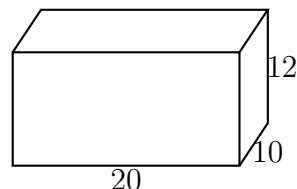
11. The ray \overrightarrow{BD} is the angle bisector of $\angle ABC$. Given that the angle measures are $m\angle ABD = 6x + 19$ and $m\angle CBD = 9x - 11$, find x .



Solids, use volume formulas**HSG.GMD.A.3**

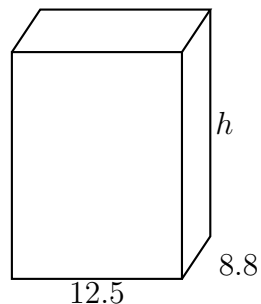
12. Find the volume of a rectangular prism volume of water. Its length is $l = 20$ feet, its height $h = 12$ feet, and depth is $w = 10$ feet. Start with the equation

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



13. A sphere has a radius of 5 centimeters. Find the volume of the sphere.

14. The rectangular prism shown has a volume of $V = 1815$ cubic centimeters. Its base measures $l = 12.5$ cm by $w = 8.8$ cm. Find its height in centimeters.

**Modeling with geometry: density****HSG.MG.A.2**

15. Find the population density of Staten Island, New York (Richmond County) in people per square mile.

Population estimate July 1, 2019: 476,143 Land area in square miles: 58.37