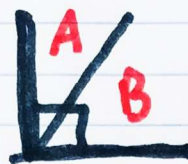


Lesson 13-5 → Finding Missing Angles with Algebra

We now know a lot about angles!

① Complementary angles add up to 90°



$$A + B = 90$$

② Supplementary angles add up to 180°



$$C + D = 180$$

③ Vertical Angles are equal



$$E = F$$

$$G = H$$

④ Triangles' Angles add up to 180°



$$Q + R + S = 180$$

Let's put this learning together with our Combining Like Terms moves and our algebra moves to get big complicated awesome problems!

Solve for x .

$$(15x+3)^\circ \quad \text{---} \quad (2x+7)^\circ$$

Remember! A straight line is 180°

$$(15x+3) + (2x+7) = 180$$

$$\begin{array}{c} 15x+3 + 2x+7 = 180 \\ \underline{\underline{000}} \quad \underline{\underline{000}} \\ \downarrow \quad \downarrow \end{array}$$

$$15x+2x \quad +3+7 = 180$$

$$17x + 10 = 180$$

$$\underline{\underline{-10}} \quad \underline{\underline{-10}}$$

$$17x = 170$$

$$\underline{\underline{17}} \quad \underline{\underline{17}}$$

$$x = 10$$