Turn in the following:

9.2 Day 1

9.2 Day 2

9.Blank: Intersecting Chords and Secants

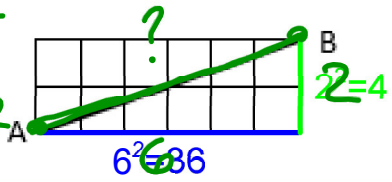
Warm-Ups:

a) Find AB (you do not need to simplify the radical)

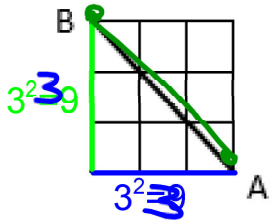
$6^2+2^2=(AB)^2$

$36+4=(AB)^2$

$\sqrt{40}=\sqrt{(AB)^2}$



$AB=\sqrt{36+4}=\sqrt{40}$

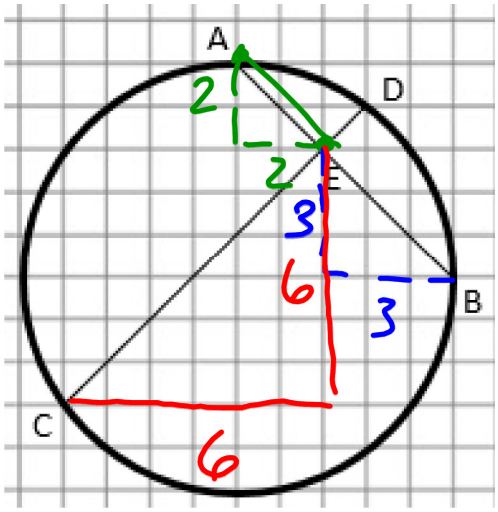


$AB=\sqrt{9+9}=\sqrt{18}$

b) Multiply the following radicals

$(\sqrt{12})(\sqrt{5}) =$ $\sqrt{12 \cdot 5} = \sqrt{60}$

$(\sqrt{72})(\sqrt{2}) =$ $\sqrt{72 \cdot 2} = \sqrt{144} = 12$



AE = $\sqrt{2^2+2^2}=\sqrt{4+4}=\sqrt{8}$

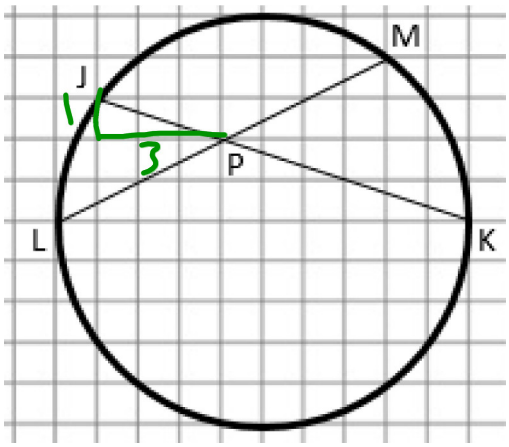
BE = $\sqrt{3^2+3^2}=\sqrt{9+9}=\sqrt{18}$

AE*BE = $\sqrt{8}*\sqrt{18}=\sqrt{144}=12$

CE = $\sqrt{6^2+6^2}=\sqrt{36+36}=\sqrt{72}$

DE = $\sqrt{1^2+1^2}=\sqrt{1+1}=\sqrt{2}$

CE*DE = $\sqrt{72}*\sqrt{2}=\sqrt{144}=12$



JP = $\sqrt{3^2 + 1^2} = \sqrt{9 + 1} = \sqrt{10}$

PK = $\sqrt{6^2 + 2^2} = \sqrt{36 + 4} = \sqrt{40}$

JP*PK = $\sqrt{10} * \sqrt{40} = \sqrt{400} = 20$

LP = $\sqrt{4^2 + 2^2} = \sqrt{16 + 4} = \sqrt{20}$

PM = $\sqrt{4^2 + 2^2} = \sqrt{16 + 4} = \sqrt{20}$

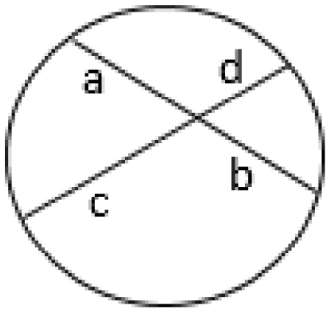
LP*PM = $\sqrt{20} * \sqrt{20} = \sqrt{400} = 20$

$\sqrt{1^2 + 3^2}$

$\sqrt{1 + 9}$

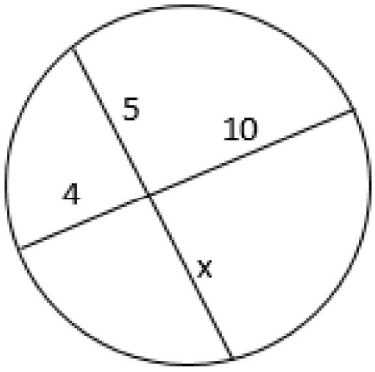
$\sqrt{10}$

If two chords intersect in a circle, they cut each other proportionally. Algebra yields that the product of the lengths of the sections from the first chord is equal to the product of the lengths of the sections from the second chord. According to this graphic, an appropriate equation is ...



$$a*b = c*d$$

Ex 1]

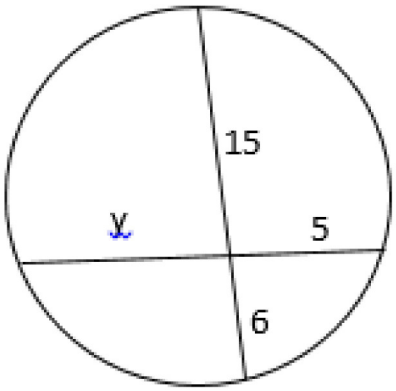


$4 \cdot 10 = 5x$

$\frac{40}{5} = \frac{5x}{5}$

$x = 8$

Ex 2]

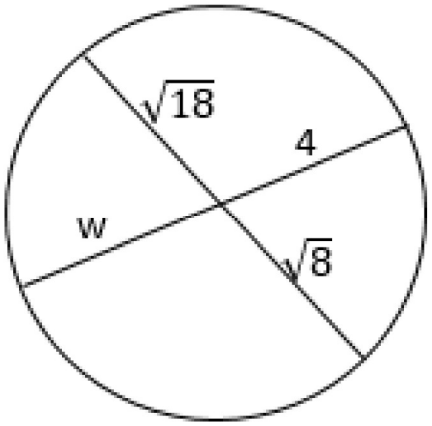


$15 \cdot 6 = 5y$

$\frac{90}{5} = \frac{5y}{5}$

$y = 18$

Ex 3]



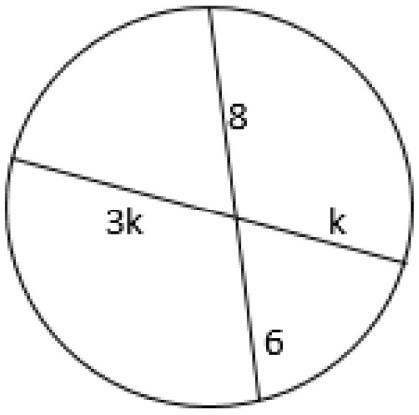
$4w = \sqrt{18} \cdot \sqrt{8}$

$4w = \sqrt{144}$

$\frac{4w}{4} = \frac{12}{4}$

$w = 3$

Ex 4]



$3k \cdot k = 8 \cdot 6$

$\frac{3k^2}{3} = \frac{48}{3}$

$\sqrt{k^2} = \sqrt{16}$

$k = 4$

Assignment:

Worksheet 9.Blank HW