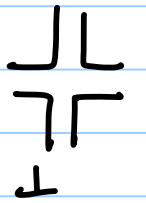
# 2.1 Q & A p5 9/15/15

Note Title 9/15/2015

9.



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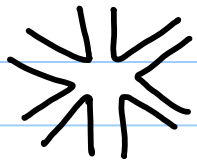
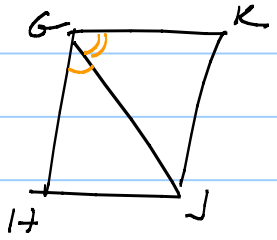
OBLIQUE : BELOIT
NATIONAL AVE
FOREST HOME
HADLEY + 76
LOOMIS RD
APPLETON AV
LISBON

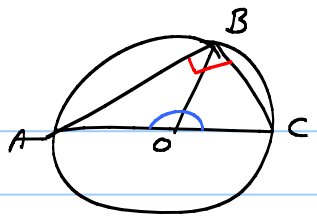


13. G: $\angle HGJ = 37°20'$
$\angle KGJ = 52°40'$
$\overline{KJ} \perp \overline{HJ}$
P: $\angle HGK \cong \angle HJK$




| Statements | Reasons |
|---|---|
| 1. $\angle HGJ = 37°20'$, $\angle KGJ = 52°40'$ | 1. Given |
| 2. $\angle HGK = 90°$ | 2. Add (1) |
| • 3. $\angle HGK$ rt $\angle$ | 3. $90° \Rightarrow$ rt $\angle$ (2) |
| 4. $\overline{KJ} \perp \overline{HJ}$ | 4. Given |
| • 5. $\angle HJK$ rt $\angle$ | 5. $\perp \Rightarrow$ rt $\angle$ (4) |
| 6. $\angle HGK \cong \angle HJK$ | 6. rt $\angle$s $\Rightarrow \cong \angle$s (3,5) |

2.1:14 $\overline{AB} \perp \overline{BC}$




$\angle ABC = 90°$

$\angle ABO + \angle OBC = \angle ABC$ $\quad$ $\angle AOB + \angle BOC = \angle AOC$

$2x+y + 6x+8 = 90°$ $\quad$ $23y+90 + 4x+4 = 180°$

$8x + y = 82$ $\quad$ $4x + 23y = 86$

$$(-2)\begin{cases} 8x + y = 82 \\ 4x + 23y = 86 \end{cases}$$

SYSTEMS CAN BE SOLVED BY ELIMINATION OR SUBSTITUTION

$$\begin{cases} 8x + y = 82 \\ -8x - 46y = -172 \end{cases}$$

$-45y = -90$

$y = 2 \Rightarrow 8x + 2 = 82$

$8x = 80$

$x = 10 \Rightarrow \{(10,2)\}$

Find $m\angle ABO = 2x + y = 22°$

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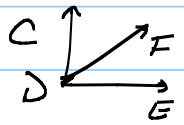
2.2:7 G: $\overleftrightarrow{CD} \perp \overleftrightarrow{DE}$

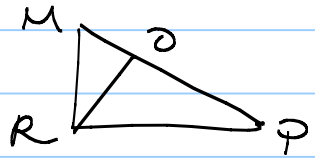
P: $\angle CDF$ comp $\angle FDE$



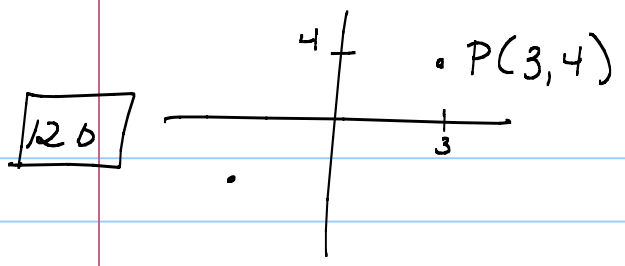

| Statements | Reasons |
|---|---|
| 1. $\overleftrightarrow{CD} \perp \overleftrightarrow{DE}$ | 1. GIVEN |
| 2. $\angle CDE$ rt$\angle$ | 2. $\perp \Rightarrow$ rt$\angle$ |
| 3. $\angle CDF$ comp $\angle FDE$ | 3. rt$\angle \Rightarrow$ comp$\angle$s |

9 G: $\angle MRO$ comp $\angle PRO$

P: $\angle MRP$ rt$\angle$




| Statements | Reasons |
|---|---|
| 1. $\angle MRO$ comp $\angle PRO$ | 1. GIVEN |
| 2. $\angle MRP$ rt$\angle$ | 2. comp$\angle$s $\Rightarrow$ rt$\angle$ |




120

2.3 was on board — see p8 or P7

2.2. $\angle$ : x

C : 90−x

S : 180−x

x = angle  180−x : supp

18. larger supp exceeds 7 times smaller by 4.

$$180-x = 7(x) + 4$$

$$180-x = 7x+4$$

$$176 = 8x$$

$$22 = x$$

larger supp = 180 − 22 = 158°

19. One comp add to half other yields 72°

$$90-x + \frac{1}{2}x = 72$$

$$90 \underbrace{-x+\tfrac{1}{2}x} = 72$$

$$90 - \tfrac{1}{2}x = 72$$

$$18 = \tfrac{1}{2}x$$

$$36 = x = \angle$$

$$54 = C$$

$$\boxed{27^\circ} = \tfrac{1}{2}C$$