

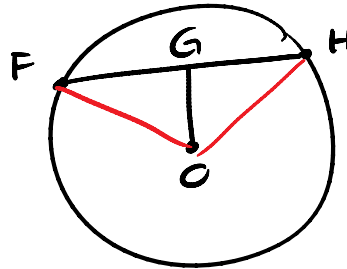
Review

pgs. 162 - 164

#1, 3, 6, 12, 13, 15 - 18

- #1 a. S
b. A
c. N
d. N
e. N

#3 Given: $\odot O$
 $\overline{OG} \perp \overline{FH}$
Conclusion: $\overline{FG} \cong \overline{GH}$

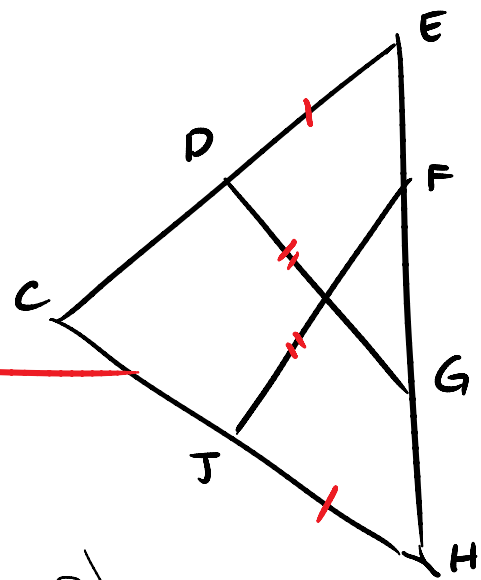


1. $\odot O$
2. Draw \overline{FO} and \overline{HO}
3. $\overline{FO} \cong \overline{HO}$ [H]
4. $\overline{GO} \cong \overline{GO}$ [L]
5. $\overline{OG} \perp \overline{FH}$
6. $\angle OGF$ and $\angle OGH$ are \perp 's
7. $\triangle OGF \cong \triangle OGH$
8. $\overline{FG} \cong \overline{GH}$

1. Given
2. 2 pts determine a line
3. All radii are \cong
4. Reflexive prop
5. Given
6. If 2 scgs are $\perp \rightarrow$ form \perp 's
7. HL (6.6, 3, 4)
8. CPCTC

#6 Given: $\overline{DG} \cong \overline{JF}$
 $\overline{DE} \cong \overline{JH}$
 $\overline{EG} \cong \overline{HF}$

Prove: $\triangle HCE$ is isosceles

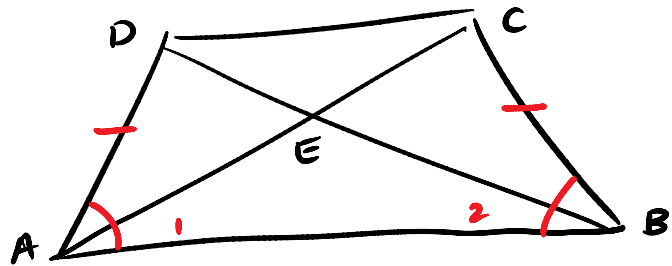


1. $\overline{DG} \cong \overline{JF}$ (S)
2. $\overline{DE} \cong \overline{JH}$ (S)
3. $\overline{EG} \cong \overline{HF}$ (S)
4. $\triangle DEG \cong \triangle JHF$
5. $\angle E \cong \angle H$
6. $\triangle HCE$ is isosceles

1. Given
2. Given
3. Given
4. SSS (1, 2, 3)
5. CPCTC
6. If at least 2 \angle 's of a \triangle are $\cong \rightarrow \triangle$ is isosceles.

#12 Given: $\overline{AD} \cong \overline{BC}$
 $\angle DAB \cong \angle CBA$

Prove: $\triangle ABE$ is isos.



1. $\overline{AD} \cong \overline{BC}$ (S)
2. $\angle DAB \cong \angle CBA$ (A)
3. $\overline{AB} \cong \overline{AB}$ (S)
4. $\triangle DAB \cong \triangle CBA$
5. $\angle 1 \cong \angle 2$
6. $\triangle ABE$ is isos

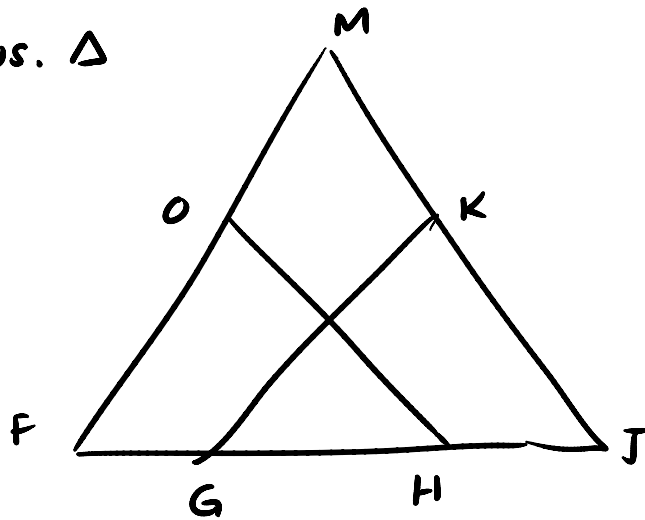
1. Given
2. Given
3. Reflexive prop
4. SAS (1, 2, 3)
5. CPCTC
6. If at least 2 \angle 's of a \triangle are $\cong \rightarrow \triangle$ is isos.

#13 Given: \overline{FJ} is the base of an isos. Δ

$$\overline{FG} \cong \overline{JH}$$

O is the midpt of \overline{MF}

K is the midpt of \overline{MJ}



Conc. $\overline{OH} \cong \overline{KG}$

1. \overline{FJ} is the base of an isos. Δ

2. $\overline{FM} \cong \overline{JM}$

3. $\angle F \cong \angle J$ (A)

4. O is the midpt of \overline{MF}

5. K is the midpt of \overline{MJ}

6. $\overline{OF} \cong \overline{KJ}$ (S)

7. $\overline{FG} \cong \overline{JH}$

8. $\overline{FH} \cong \overline{GJ}$ (S)

9. $\Delta OFH \cong \Delta KJG$

10. $\overline{OH} \cong \overline{KG}$

1. Given

2. If a Δ is isos \rightarrow legs \cong

3. If $\Delta \rightarrow \Delta$

4. Given

5. Given

6. If 2 segs are $\cong \rightarrow$ their like divisions are \cong

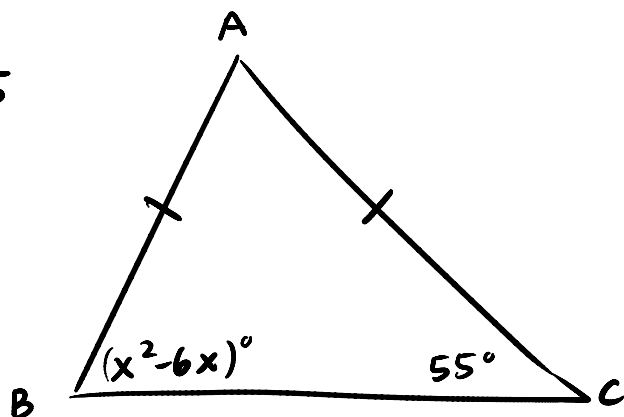
7. Given

8. If the same seg is added to \cong segs \rightarrow sums \cong

9. SAS (6, 3, 8)

10. CPCTC

#15



$$x^2 - 6x = 55$$

$$x^2 - 6x - 55 = 0$$

$$(x-11)(x+5) = 0$$

$$x = 11 \quad x = -5$$

16 Given. $\triangle NEW \cong \triangle CAR$

$$EN = 11$$

$$AR = 2x - 4y$$

$$NW = x + y$$

$$CA = 4x + y$$

$$EW = 10$$

$$4(4x + y = 11) \Rightarrow 16x + 4y = 44$$

$$2x - 4y = 10 \Rightarrow \underline{2x - 4y = 10}$$

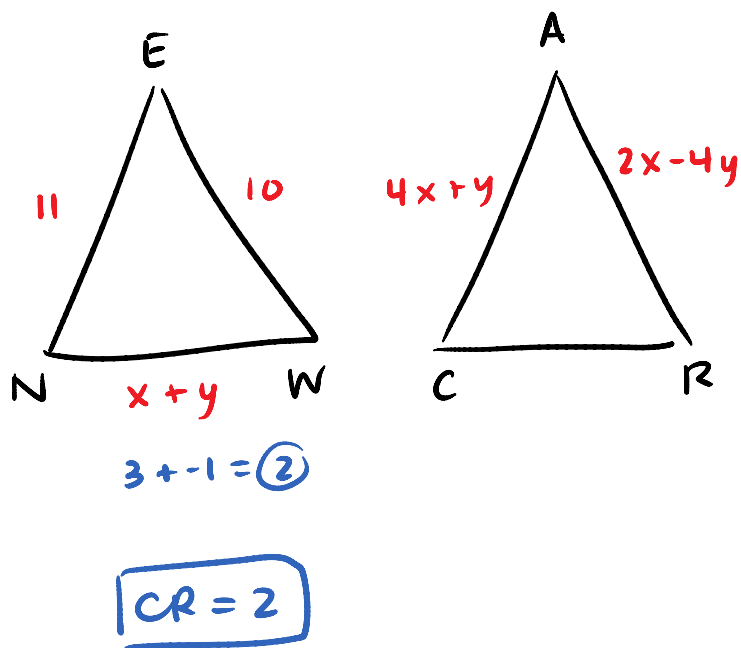
$$18x = 54$$

$$\boxed{x = 3}$$

$$4(3) + y = 11$$

$$12 + y = 11$$

$$\boxed{y = -1}$$



17 Given: $\triangle FJH$ is isos w/ base \overline{JH}
K and G are midpts

$$FK = 2x + 3$$

$$GH = 5x - 9$$

$$JH = 4x$$

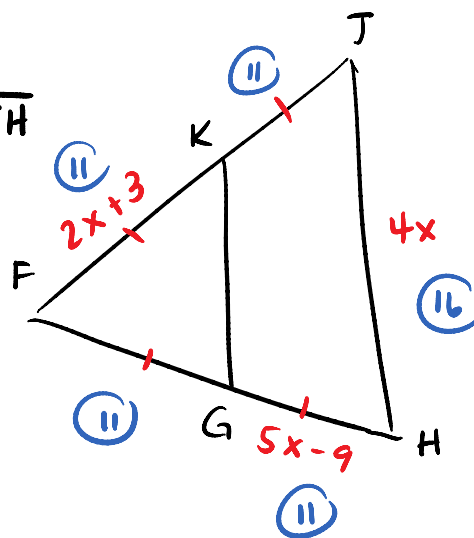
Find: Per of $\triangle FJH$

$$2x + 3 = 5x - 9$$

$$12 = 3x$$

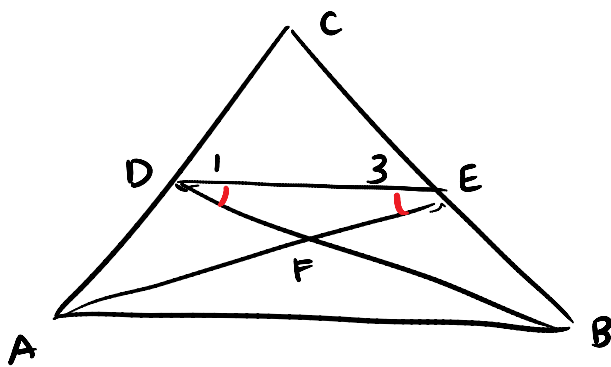
$$4 = x$$

$$\text{Perimeter} = 4(11) + 16 = \boxed{60}$$



#18 Given: $\overline{AC} \cong \overline{BC}$
 $\angle 1 \cong \angle 3$

Prove: $\triangle DFE$ is isos.



1. $\overline{AC} \cong \overline{BC}$ (S)
2. $\angle 1 \cong \angle 3$
3. $\overline{CD} \cong \overline{CE}$ (S)
4. $\angle C \cong \angle C$ (A)
5. $\triangle ACE \cong \triangle BCD$
6. $\angle AEC \cong \angle BDC$
7. $\angle FDE \cong \angle FED$
8. $\triangle DFE$ is isos.

1. Given
2. Given
3. If $\Delta \rightarrow \Delta$
4. Reflexive prop
5. SAS (1, 4, 3)
6. CPCTC
7. If 2 \cong \angle 's are subtracted from 2 \cong \angle 's \rightarrow difts are \cong
8. If at least 2 \angle 's of a Δ are $\cong \rightarrow \Delta$ is isos