

Key

A#20 Part II p. 67-68 Chpt Review #5-18

p. 68-69 Chpt Test #5-12

p. 67-68 Chpt Review #5-18

5. If $m\angle A + m\angle B + m\angle C = 180^\circ$ and $m\angle C = 50^\circ$, then $m\angle A + m\angle B + 50^\circ = 180^\circ$.
[Subst. Prop. of =]

6. If $m\angle A + m\angle B + 50^\circ = 180^\circ$, then $m\angle A + m\angle B = 130^\circ$. [Subtr. Prop. of =]

7. If $Cx = 18$, then $x = 3$. [Division Prop. of =]

8. If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$, then $\overline{AB} \cong \overline{EF}$. [Trans. Prop. of \cong]

9. If $\overline{RS} \cong \overline{ST}$, then S is the midpoint of \overline{RT} .

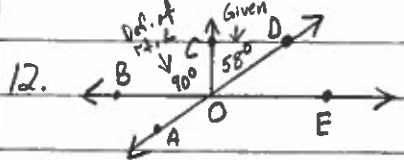
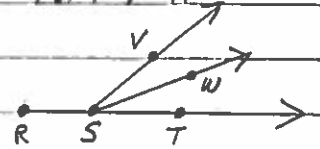
[Def. of Midpoint]

10. If \overrightarrow{SW} bisects $\angle VST$, then $\angle VSW \cong \angle WST$.

[Def. of \angle bisector]

11. If \overrightarrow{SW} bisects $\angle VST$, then $m\angle WST = \frac{1}{2} m\angle VST$. [\angle bisector Thm #1]

For #9-11



Given: $\angle BOC$ is a right \angle ; $m\angle COD = 58^\circ$.

Find $m\angle DOE$, $m\angle BOA$, and $m\angle AOC$.

① $m\angle DOE + m\angle COD + m\angle BOC = 180^\circ$ [\angle Add. Post.]

$m\angle DOE + 58 + 90 = 180^\circ$ [Subst. Prop. of =]

$m\angle DOE = 32^\circ$ [Subst. Prop. of =]

② $\angle DOE \cong \angle BOA$ [Vert. \angle s Thm]

$m\angle BOA = 32^\circ$ [Def. of $\cong \angle$ s]

③ $m\angle AOC = m\angle BOA + m\angle BOC$ [\angle Add. Post.]

$m\angle AOC = 32 + 90$ [Subst. Prop. of =]

$m\angle AOC = 122^\circ$

13. $\angle AOE$ is supp. to $\angle BOA$ and $\angle DOE$. [\angle Add. Post.]

14. ① Let $x =$ original \angle .

Supp = $180 - x$ [Def. of Supp. \angle s]

Comp = $90 - x$ [Def. of Comp. \angle s]

② Supp = 4 (comp) [Given]

$180 - x = 4(90 - x)$

$180 - x = 360 - 4x$

$3x = 180$

$x = 60$

The original \angle is a 60 degree angle.

A#20 Part II continued

Key

p. 68 #15-18 and p. 68-69 Chpt Test #5-12

For #15-18

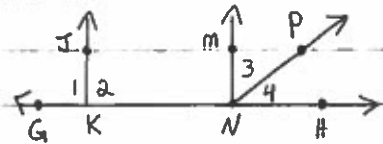
15. If $\vec{KJ} \perp \vec{GH}$, then $\angle 1$ is a right \angle . [Def. of \perp]

16. If $\angle 2$ is a $90^\circ \angle$, then $\vec{KJ} \perp \vec{GH}$. [Def. of \perp]

17. If $\vec{NM} \perp \vec{GH}$, then $\angle MNK \cong \angle MNH$.

[\perp lines $\rightarrow \cong$ adj. \angle s]

18. If $\vec{NM} \perp \vec{GH}$, then $\angle 3$ and $\angle 4$ are complementary. [Ext. sides $\perp \rightarrow$ Adj. Comp. \angle s]



p. 68-69 Chpt Test #5-12

5. Given: \vec{OB} is the bisector of $\angle AOC$

\vec{OC} is the bisector of $\angle BOD$

$m\angle AOC = 60^\circ$

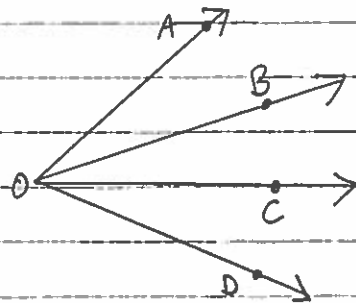
Find $m\angle COD$.

① $m\angle BOC = \frac{1}{2} m\angle AOC$ [\angle Bisector Thm #1]

$m\angle BOC = 30^\circ$ [Subst. Prop. of =]

② $m\angle COD = m\angle BOC$ [\angle Bisector Thm #1]

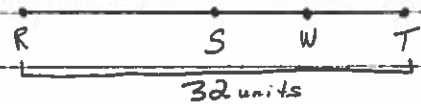
$m\angle COD = 30^\circ$ [Trans. Prop. of =]



6. Given: S is the midpoint of \overline{RT}

W is the midpoint of \overline{ST}

$RT = 32$ units



Find ST , WT , and RW .

① $ST = \frac{1}{2} RT$ [Midpt Thm] ② $WT = \frac{1}{2} ST$ [Midpt Thm]

$ST = 16$ units [Subst. Prop. of =] $WT = 8$ units [Subst. Prop. of =]

③ $RW + WT = RT$ [Seg. Add. Post.]

$RW + 8 = 32$ [Subst. Prop. of =]

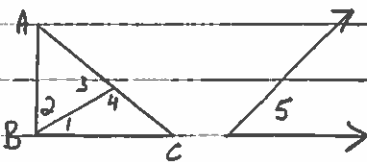
$RW = 24$ units [Subtr. Prop. of =]

For #7-9

7. Given: $\overline{AB} \perp \overline{BC}$

a. $\angle 3$ and $\angle 4$ are supplementary [\angle Add Post]

b. $\angle 1$ and $\angle 2$ are complementary [Ext. sides $\perp \rightarrow$ Adj. Comp. \angle s]



8. Given: $\angle 5$ is supplementary to $\angle 4$

a. $\angle 3 \cong \angle 5$ b. [\cong supplements Thm]

9. Given: $m\angle 3 = 3x + 5$; $m\angle 4 = 6x + 13$ ① $m\angle 3 + m\angle 4 = 180^\circ$ [\angle Add Post]

$3x + 5 + 6x + 13 = 180$ [Subst. Prop. of =]

$9x = 162$ [Dist. Prop + Subst. Prop. of =]

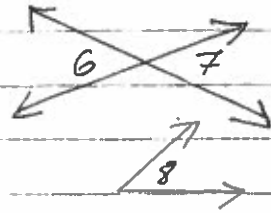
$x = 18$ [Div. Prop. of =]

A#20 Part II continued

Key

p. 69 #10-12

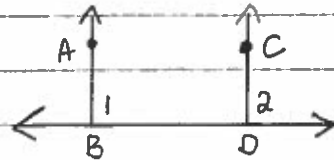
10. $\angle 6 \cong \angle 7$ [Vert. \angle s Thm]



11. Given: $\angle 6 \cong \angle 7$ and $\angle 7 \cong \angle 8$
 $\angle 6 \cong \angle 8$ [Trans. Prop. of \cong]

12. Given: $\overrightarrow{DC} \perp \overleftrightarrow{BD}$; $\angle 1 \cong \angle 2$

Prove: $\overrightarrow{BA} \perp \overleftrightarrow{BD}$



statements	Reasons
① $\overrightarrow{DC} \perp \overleftrightarrow{BD}$; $\angle 1 \cong \angle 2$	① Given
② $m\angle 2 = 90^\circ$	② Def. of \perp
③ $m\angle 1 = m\angle 2$	③ Def. of $\cong \angle$ s
④ $m\angle 1 = 90^\circ$	④ Trans. Prop. of $=$
⑤ $\overrightarrow{BA} \perp \overleftrightarrow{BD}$	⑤ Def. of \perp