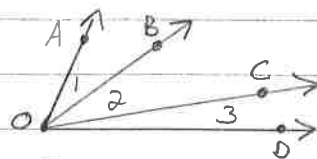


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Key

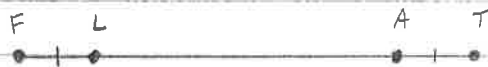
Statements	Reasons
6. $x - 2 = \frac{2x + 8}{5}$	[Given]
$5(x - 2) = 2x + 8$	[Mult. Prop. of =]
$5x - 10 = 2x + 8$	[Distributive Property]
$3x - 10 = 8$	[Subtraction Prop. of =]
$3x = 18$	[Add. Prop. of =]
$x = 6$	[Division Prop. of =]

7. Given:  $\angle AOD$  as shown  
 Prove:  $m\angle AOD = m\angle 1 + m\angle 2 + m\angle 3$



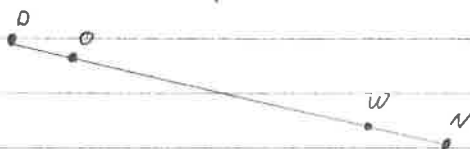
Statements	Reasons
① $m\angle AOD = m\angle AOC + m\angle 3$	$\angle$ Add. Post.
② $m\angle AOC = m\angle 1 + m\angle 2$	$\angle$ Add. Post.
③ $m\angle AOD = m\angle 1 + m\angle 2 + m\angle 3$	Subst. Prop. of = $(2 \rightarrow 1)$ * Required

8. Given:  $FL = AT$   
 Prove:  $FA = LT$



Statements	Reasons
① $FL = AT$	Given
② $LA = LA$	Reflexive Prop. of =
③ $FL + LA = AT + LA$	Addition Prop. of = $(1+2)$ * Required
④ $FL + LA = FA$ ; $LA + AT = LT$	Segment Addition Postulate
⑤ $FA = LT$	Subst. Prop. of = $(4 \rightarrow 3)$ * Required

9. Given:  $DW = ON$   
 Prove:  $DO = WN$

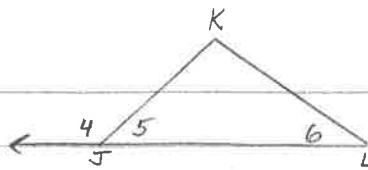


Statements	Reasons
① $DW = ON$	Given
② $DW = DO + OW$ ; $ON = OW + WN$	Segment Addition Postulate
③ $DO + OW = OW + WN$	Substitution Prop. of = $(2 \rightarrow 1)$ * Required
④ $OW = OW$	Ref. Prop. of =
⑤ $DO = WN$	Subtr. Prop. of = $(3 - 4)$ * Required

Key

10. Given:  $m\angle 4 + m\angle 6 = 180^\circ$

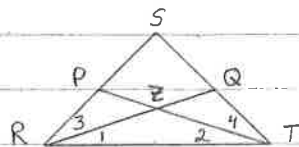
Prove:  $m\angle 5 = m\angle 6$



Statements	Reasons
① $m\angle 4 + m\angle 6 = 180$	Given
② $m\angle 4 + m\angle 5 = 180$	$\angle$ Add. Post.
③ $m\angle 4 + m\angle 5 = m\angle 4 + m\angle 6$	Transitive Prop. of = or Subst. Prop. of = (① $\rightarrow$ ②)
④ $m\angle 4 = m\angle 4$	Ref. Prop. of =
⑤ $m\angle 5 = m\angle 6$	Subtr. Prop. of = (③ - ④) * Required

11. Given:  $m\angle 1 = m\angle 2$ ;  $m\angle 3 = m\angle 4$

Prove:  $m\angle SRT = m\angle STR$



Statements	Reasons
① $m\angle 1 = m\angle 2$ ; $m\angle 3 = m\angle 4$	Given
② $m\angle 1 + m\angle 3 = m\angle 2 + m\angle 4$	Add. Prop. of = (① + ①) * Required
③ $m\angle 1 + m\angle 3 = m\angle SRT$ ; $m\angle 2 + m\angle 4 = m\angle STR$	$\angle$ Add. Post.
④ $m\angle SRT = m\angle STR$	Trans. Prop. of =

12. Given:  $RP = TQ$ ;  $PS = QS$

Prove:  $RS = TS$

[See Diagram above]

Statements	Reasons
① $RP = TQ$ ; $PS = QS$	Given
② $RP + PS = TQ + QS$	Add. Prop. of = (① + ①) * Required
③ $RP + PS = RS$ ; $TQ + QS = TS$	Seg. Add. Post.
④ $RS = TS$	Trans. Prop. of =

13. Given:  $RQ = TP$ ;  $ZQ = ZP$

Prove:  $RZ = TZ$

[See Diagram above]

Statements	Reasons
① $RQ = TP$ ; $ZQ = ZP$	Given
② $RZ + ZQ = RQ$ ; $TZ + ZP = TP$	Seg. Add. Post.
③ $RZ + ZQ = TZ + ZP$	Trans. Prop. of =
④ $RZ = TZ$	Subtr. Prop. of = (③ - ①) * Required