

16. Corresponding sides: \overline{CA} and \overline{DA} , \overline{AE} and \overline{AB} , \overline{EC} and \overline{BD} ;

Corresponding angles: $\angle CAE$ and $\angle DAB$, $\angle AEC$ and $\angle ABD$, $\angle ECA$ and $\angle BDA$

$\angle A \cong \angle A$ by the reflexive property, and $\triangle CAE \cong \triangle DAB$ by AAS. Each corresponding angle and side of $\triangle CAE$ and $\triangle DAB$ are congruent by CPCTC.

17. $\angle FHL$; $\triangle JGK \cong \triangle FHL$ by ASA. Each corresponding angle and side of $\triangle JGK$ and $\triangle FHL$ are congruent by CPCTC. $\angle FHL$ and $\angle JGK$ are congruent.

18. \overline{GK} ; $\triangle JGK \cong \triangle FHL$ by ASA. Each corresponding angle and side of $\triangle JGK$ and $\triangle FHL$ are congruent by CPCTC. \overline{HL} and \overline{GK} are congruent.

19. $\angle XVZ$; $\angle Z \cong \angle Z$ by the reflexive property. $\triangle WYZ \cong \triangle XVZ$ by ASA. Each corresponding angle and side of $\triangle WYZ$ and $\triangle XVZ$ are congruent by CPCTC. $\angle WYZ$ and $\angle XVZ$ are congruent.

20. \overline{WY} $\angle Z \cong \angle Z$ by the reflexive property. $\triangle WYZ \cong \triangle XVZ$ by ASA. Each corresponding part of $\triangle WYZ$ and $\triangle XVZ$ are congruent by CPCTC. \overline{XV} and \overline{WY} are corresponding parts.

24. Not necessarily; the only information given in the diagram is that the sides are congruent. Two sets of congruent sides is not sufficient to prove $\triangle ABC$ and $\triangle DBC$ are congruent.

25. Yes; by SAS, $\triangle RST \cong \triangle QUT$, and therefore $\overline{ST} \cong \overline{UT}$. So, $\overline{RP} \cong \overline{QM}$, and by ASA, $\triangle RNP \cong \triangle QNM$, which means that $\overline{MN} \cong \overline{PN}$.

26. 9.92 meters; Use the Pythagorean Theorem to find the hypotenuse across from the right angle. The width is two hypotenuses minus the 4.5 meters where they overlap. The bottom middle section is 4.5 meters long because of vertical angles as SAS makes it congruent with the top middle.

$$\sqrt{4^2 + (3 + 3)^2} = \sqrt{52}$$

$$\sqrt{52} + \sqrt{52} - 4.5 = 9.92$$