

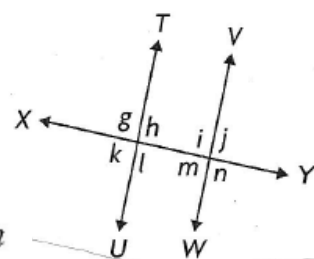
Worksheet – Chapter 2 Review

1. In the figure shown, which angles are supplementary interior angles?

A. $\angle h, \angle j$ B. $\angle g, \angle n$ C. $\angle h, \angle i$ D. $\angle h, \angle m$

2. Which angles are alternate interior angles?

A. $\angle h, \angle j$ B. $\angle g, \angle n$ C. $\angle h, \angle i$ D. $\angle h, \angle m$

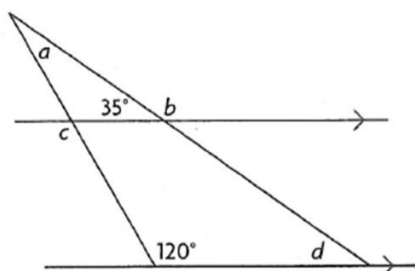


3. In the figure shown, what is the measure of $\angle a$?

A. 25° B. 35° C. 120° D. 145°

4. What is the measure of $\angle c$?

A. 25° B. 35° C. 120° D. 145°



5. In the figure shown, what is the measure of $\angle CDE$?

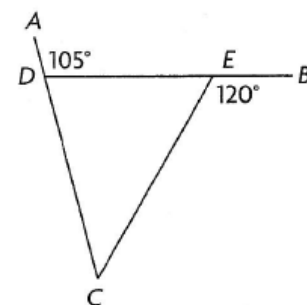
A. 75° B. 60° C. 120° D. 45°

6. What is the measure of $\angle ECD$?

A. 75° B. 60° C. 120° D. 45°

7. What is the measure of $\angle DEC$?

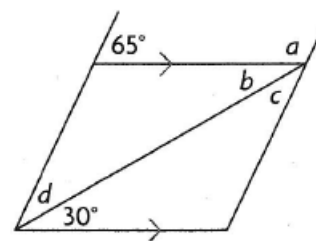
A. 75° B. 60° C. 120° D. 45°



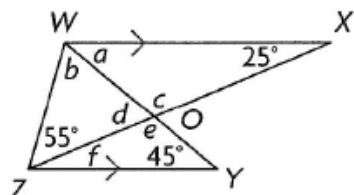
8. What is the sum of the measures of the interior angles of a polygon with 17 sides?

A. 3060° B. 2880° C. 2700° D. 159°

9. Determine the measures of angles a , b , c , and d .



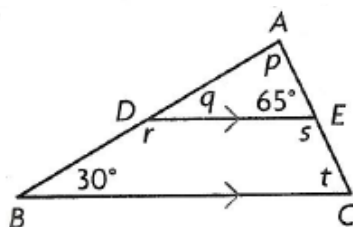
10. Determine the measures of the unknown angles in figure $WXYOZ$.



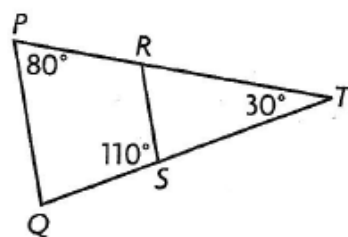
11. a) Determine the sum of the interior angles of a regular 18-sided polygon.

- b) Determine the measure of an interior angle of a regular 18-sided polygon

12. Determine the measures of angles p , q , r , s , and t . Give reasons.

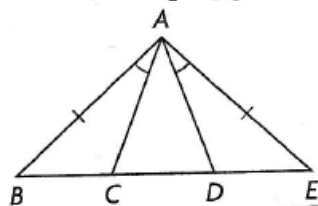


13. Prove that $PQ \parallel RS$.



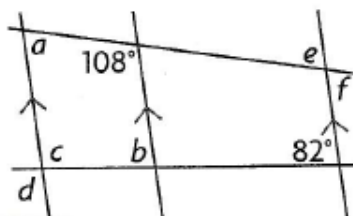
14. The sum of the measures of the interior angles of an unknown polygon is 3780° . Determine the number of sides that the polygon has. Show your work.

15. Prove that $\triangle ACD$ is isosceles.



16. Determine each angle measure.

17. Textbook p.102 # 18



ANSWERS:

1. C
2. D
3. A
4. C
5. A
6. D
7. B
8. C

9. $\angle b = 30^\circ$, $\angle d = 35^\circ$
Not enough information to determine the measures of $\angle a$ and $\angle c$

10. $\angle a = 45^\circ$, $\angle b = 55^\circ$, $\angle c = 110^\circ$, $\angle d = 70^\circ$, $\angle e = 110^\circ$, $\angle f = 25^\circ$

11. a) $S = 2880^\circ$
b) $a = 160^\circ$

$\angle q = 30^\circ$ corresponding angles

$\angle t = 65^\circ$ corresponding angles

12. $\angle r = 150^\circ$ co-interior angles
 $\angle s = 115^\circ$ co-interior angles
 $\angle p = 85^\circ$ angle sum of a triangle = 180°

$\angle RST = 70^\circ$ supplementary angles

13. $\angle PQT = 70^\circ$ angle sum of a triangle = 180°
 $\angle RST = \angle PQT$ transitive property
 $\therefore PQ \parallel RS$ corresponding angles are equal

14. $n = 23$

$AB = AE$ (given)

$\triangle ABE$ is isosceles (two sides are congruent)

$\angle B = \angle E$ (base angles in isosceles triangle)

15. $\angle BAC = \angle EAD$ (given)
 $\triangle ABC \cong \triangle AED$ (ASA)
 $AC = AD$ (CPCTC)
 $\therefore \triangle ACD$ is isosceles (two sides are congruent)

16. $\angle a = 72^\circ$, $\angle b = 82^\circ$, $\angle c = 98^\circ$, $\angle d = 98^\circ$, $\angle e = 72^\circ$, $\angle f = 72^\circ$

17.

ABCDE is a regular pentagon	given
$ED = DC$	all sides of a regular pentagon are congruent
$\triangle EOD$ is isosceles, with $EO = DO$	given
$DO = CO$	given
$\triangle OED \cong \triangle OCD$	SSS
$\angle OED = \angle ODE$	base angles in an isosceles triangle are equal
$\triangle ODC$ is isosceles	definition of isosceles
$\angle ODC = \angle OCD$	base angles in an isosceles triangle are equal
$\angle OED = \angle ODE = \angle ODC = \angle OCD$	CPCTC
$\angle EDC = 108^\circ$ $\therefore \angle ODE = \angle ODC = 54^\circ$ So, $\angle OED = 54^\circ$	each interior angle of a regular pentagon measures 108°
$\angle EAD = \angle EDA$ So, $\angle EDA = \frac{180^\circ - 108^\circ}{2} = 36^\circ$	$\triangle ADE$ is isosceles since pentagon ABCDE is regular
$\angle EFD = 90^\circ$	angle sum of a triangle ($\triangle EFD$)
$\triangle EFD$ is a right triangle	definition of right triangle