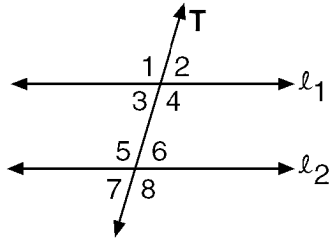


Name: _____
 CC Geometry

Unit 1 Test Review

Questions 1 through 3 refer to the following:

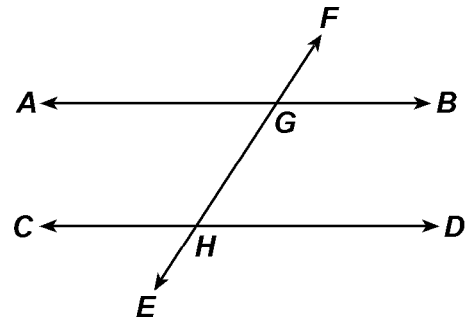


- 1) $\angle 1$ and $\angle 5$ can be classified as
 - A) alternate interior angles
 - B) corresponding angles
 - C) interior angles on the same side of the transversal
 - D) none of these

- 2) $\angle 6$ and $\angle 7$ can be classified as
 - A) alternate interior angles
 - B) corresponding angles
 - C) interior angles on the same side of the transversal
 - D) none of these

- 3) $\angle 3$ and $\angle 5$ can be classified as
 - A) alternate interior angles
 - B) corresponding angles
 - C) interior angles on same side of transversal
 - D) none of these

- 4) In the accompanying diagram, parallel lines \overleftrightarrow{AB} and \overleftrightarrow{CD} are cut by transversal \overleftrightarrow{FE} at points G and H , respectively.



If $m\angle BGE = (2x + 25)^\circ$ and $m\angle DHF = (3x - 50)^\circ$, what is an equation that can be used to find the value of x ?

- A) $2x + 25 = 3x - 50$
 - B) $2x + 25 + 3x - 50 = 180$
 - C) $2x + 25 + 3x - 50 = 90$
 - D) $2(x + 25) = 3(x - 50)$
- 5) Which one of the following pairs of angles x and y are supplementary?
- A) $m\angle x = 113^\circ$, $m\angle y = 67^\circ$
 - B) $m\angle x = 180^\circ$, $m\angle y = 180^\circ$
 - C) $m\angle x = 76^\circ$, $m\angle y = 14^\circ$
 - D) $m\angle x = 140^\circ$, $m\angle y = 190^\circ$
- 6) In isosceles triangle ABC , $\overline{AB} \cong \overline{BC}$ and $m\angle B = 70^\circ$. What is the measure of an exterior angle at vertex C ?
- A) 55°
 - B) 70°
 - C) 110°
 - D) 125°

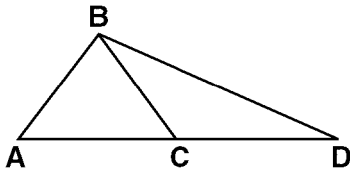
7) An exterior angle at the base of an isosceles triangle measures 110° . What is the measure of the vertex angle?

- A) 110° C) 55°
 B) 40° D) 70°

8) Morita's teacher told her that angles A and B are complementary angles. Morita knows that the sum of angle A and angle B has to be ninety degrees. What other fact could Morita know about angles A and B ?

- A) Both angles are right angles.
 B) One angle is acute and the other is obtuse.
 C) Both angles are obtuse angles.
 D) Both angles are acute angles.

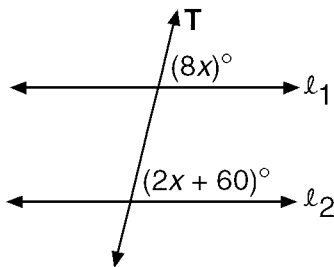
9) In the figure below, $\overline{AB} \cong \overline{BC}$.



If $m\angle ABC = 80^\circ$, what is $m\angle BCD$?

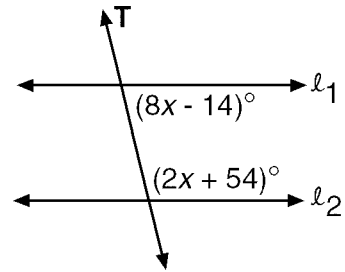
- A) 50° C) 130°
 B) 80° D) 100°

10) What is the value of x that makes $l_1 \parallel l_2$?



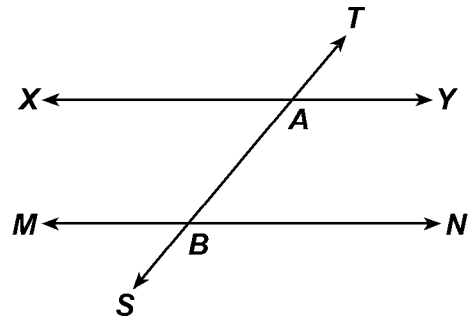
- A) 6 C) 10
 B) 12 D) 20

11) What is the value of x that makes $l_1 \parallel l_2$?



- A) 23.3 C) 11.3
 B) 22 D) 14

12) In the accompanying diagram, parallel lines \overline{XY} and \overline{MN} are cut by transversal \overline{TS} at points A and B , respectively.

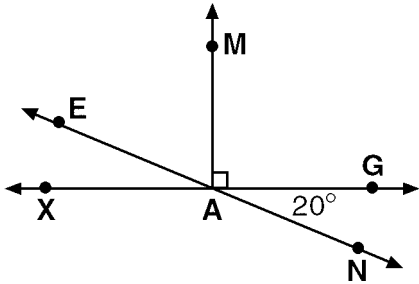


If $m\angle XAS = (5x)^\circ$ and $m\angle NBT = (9x - 40)^\circ$, what is $m\angle NBT$?

- A) 59° C) 50°
 B) 139° D) 10°

Questions 13 and 14 refer to the following:

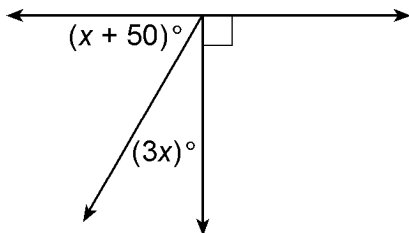
In the diagram below, \overline{XG} and \overline{EN} intersect at A, $\overline{AM} \perp \overline{XG}$, and $m\angle GAN = 20^\circ$.



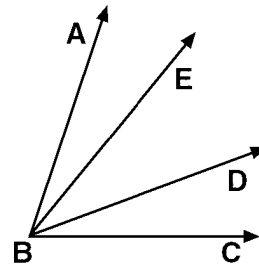
13) Name a pair of vertical angles.

14) Name two right angles.

15) Solve for x in the diagram below.



Questions 16 and 17 refer to the following:

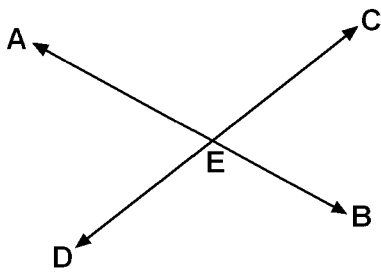


16) If \overline{BE} bisects $m\angle ABD$ and $m\angle EBD = 32^\circ$, find $m\angle ABD$.

17) If \overline{BE} bisects $m\angle ABD$, $m\angle ABE = (y - 8)^\circ$ and $m\angle ABD = (5y - 100)^\circ$, find the value of y.

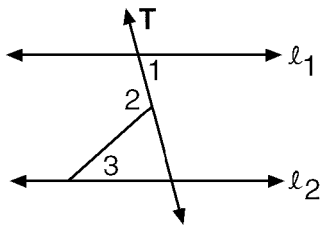
18) $\angle 1$ and $\angle 2$ are complementary. If $m\angle 1 = (x + 3)^\circ$ and $m\angle 2 = (4x - 8)^\circ$, find the value of x.

- 19) In the accompanying diagram, \overline{AB} and \overline{CD} intersect at E.



If $m\angle AEC = (2x + 40)^\circ$ and $m\angle CEB = (x + 20)^\circ$, find x .

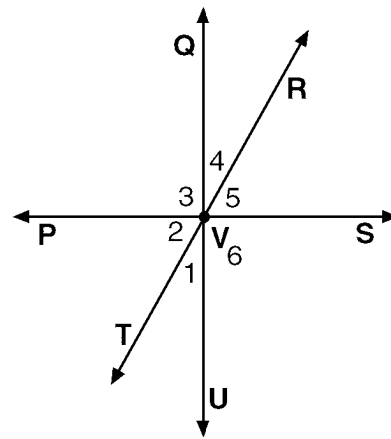
- 20) In the diagram below, $l_1 \parallel l_2$.



If $m\angle 1 = 80^\circ$ and $m\angle 2 = 110^\circ$, find $m\angle 3$.

Questions 21 and 22 refer to the following:

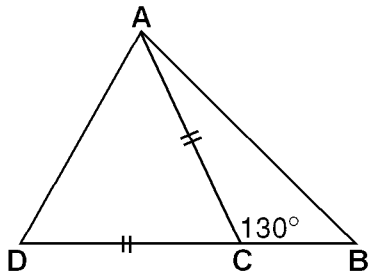
In the diagram below, $\overline{QU} \perp \overline{PS}$.



- 21) If $m\angle QVS = 5x^\circ$, find the value of x .

- 22) If $m\angle 2 = (3x + 16)^\circ$ and $m\angle 5 = (4x + 1)^\circ$, find the value of x .

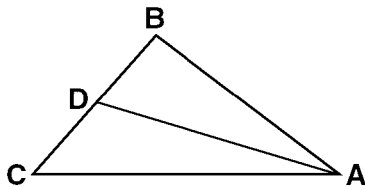
- 23) In the accompanying diagram of $\triangle ADB$, \overline{DCB} , $\overline{CD} \cong \overline{CA}$, and $m\angle ACB = 130^\circ$.



Find $m\angle D$.

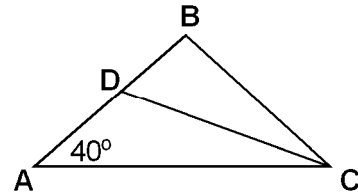
- 24) If the measures of the angles of a triangle are represented by $x - 5$, $2x + 3$, and $4x$, find the measures of the three angles.

- 25) In $\triangle ABC$ below, \overline{AD} bisects $\angle BAC$.



If $m\angle C = 40^\circ$ and $m\angle BAC = 28^\circ$, find $m\angle ADC$.

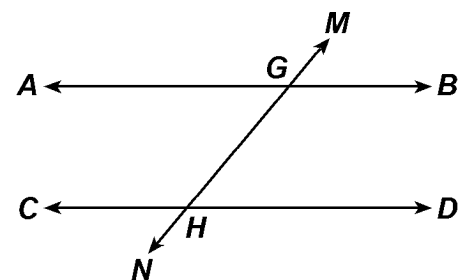
- 26) In the accompanying diagram of isosceles triangle ABC , $\overline{BA} \cong \overline{BC}$ and \overline{DC} bisects $\angle ACB$.



If $m\angle A = 36^\circ$, find $m\angle CDB$.

- 27) In $\triangle RST$, $\overline{RS} \cong \overline{ST}$. If $m\angle R = (2x - 10)^\circ$ and $m\angle S = x^\circ$, find the value of x .

- 28) In the diagram below, $\overline{AB} \parallel \overline{CD}$ and each is intersected by \overline{MN} at G and H , respectively. If $m\angle BGH = (2x + 50)^\circ$ and $m\angle CHG = (5x - 70)^\circ$, find $m\angle BGH$. Show all your work.



1) B 2) D 3) C 4) B 5) A

6) D 7) B 8) D 9) C 10) C

11) D 12) C

13) $\angle EAX, \angle NAG$

14) $\angle MAG, \angle MAX$

15) 10

16) 64°

17) 28

18) 19

19) 40

20) 30°

21) 18

22) 15

23) 65°

24) $21^\circ, 55^\circ, 104^\circ$

25) 126°

26) 54°

27) 40

28) 130°

WORK SHOWN: $2x + 50 = 5x - 70$, $-3x = -120$, $x = 40$, $m\angle BGH = 2(40) + 50 = 130$