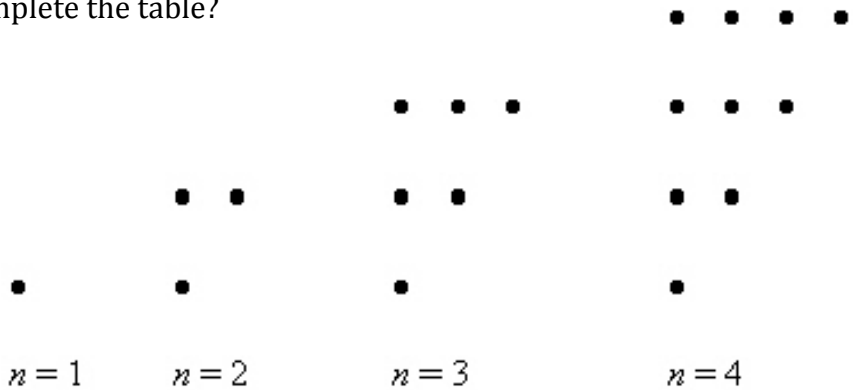


Name: _____
 Period: _____

Cumulative Review 1-4
 Geometry

1. Which three numbers complete the table?

- A. 9, 12, 15
- B. 7, 8, 9
- C. 10, 15, 21
- D. 12, 24, 48



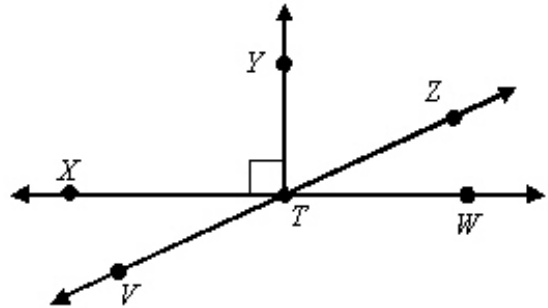
n	1	2	3	4	5	6
n th number	1	3	6	?	?	?

2. If a right angle is bisected, the resulting angles _____.

- A. are both right angles
- B. each measure 45°
- C. are never acute
- D. are never congruent

3. Name an angle supplementary to $\angle YTZ$.

- A. $\angle ZTW$
- B. $\angle YTV$
- C. $\angle XTV$
- D. $\angle YTX$



4. The *nonshared* sides of two *adjacent* angles are perpendicular. The angles are _____.

- A. Supplementary
- B. Vertical
- C. Complementary
- D. A linear pair

5. \overrightarrow{AB} and \overrightarrow{AC} are opposite rays. \overrightarrow{AD} bisects $\angle BAE$. $m\angle EAD = 36^\circ$. Sketch and find $m\angle EAC$.

- A. 36°
- B. 108°
- C. 72°
- D. 54°

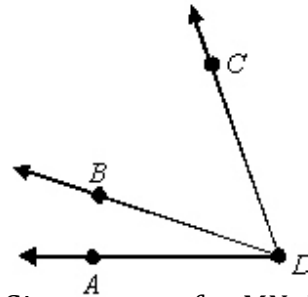
6. Which statement supports the following conjecture?

All perfect squares are odd.

- A. 16
- B. 25
- C. 64
- D. 100

7. $m\angle CDB = (8y + 8)^\circ$ and $m\angle BDA = (5y - 3)^\circ$ and $m\angle ADC = 70^\circ$. Find $m\angle CDB$ and $m\angle BDA$.

- A. $m\angle CDB = 48^\circ$ and $m\angle BDA = 22^\circ$
- B. $m\angle CDB = 45^\circ$ and $m\angle BDA = 25^\circ$
- C. $m\angle CDB = 22^\circ$ and $m\angle BDA = 48^\circ$
- D. $m\angle CDB = 25^\circ$ and $m\angle BDA = 45^\circ$



8. In the diagram, $\overline{QN} \perp \overline{MP}$ and N is the midpoint of \overline{MP} . Give a reason for $MN=NP$.

- A. Segment Addition Postulate
- B. Definition of Congruent Segments
- C. Definition of Midpoint
- D. Definition of Perpendicular Lines

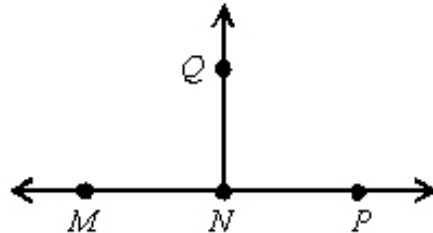
9. Given: $MN=4$ and $2(LN)+4(MN)=20$. Use the substitution property of equality to find the value of LN .

- A. 2
- B. 3
- C. 6
- D. 3.5

10. Identify the property of equality.

If $AB=CD$ and $CD=EF$, then $AB=EF$.

- A. Symmetric Property
- B. Reflexive Property
- C. Substitution Property of Equality
- D. Transitive Property



11. Rewrite the biconditional as a conditional statement and its converse.

Three points are collinear if and only if they lie on the same line.

- A. Conditional: If three points are collinear, then they lie on the same line
Converse: If three points lie on the same line, then they are collinear.
- B. Conditional: If three points are collinear, then they lie on the same line.
Converse: If three points do not lie on the same line, then they are not collinear.
- C. Conditional: If three points do not lie on the same line, then they are not collinear.

Converse: If three points are not collinear, then they do not lie on the same line.

- D. Conditional: If three points are not collinear, then they do not lie on the same line.

Converse: If three points do not lie on the same line, then they are not collinear.

12. Which of the following statements is false?

- A. Two points always determine a line.
- B. Two intersecting lines sometimes meet in one point.
- C. Two intersecting planes always meet in one line.
- D. A plane always contains at least three noncollinear points.

13. What is the underlined portion called in the following conditional statement?

"If it snows, then it will be cold."

- A. The Conclusion
- B. The Hypothesis
- C. The Argument
- D. The Converse

14. Consider the conditional statement, "If $x = -6$, then $x^2 = 36$."

Which choice below is false?

- A. The conditional statement is true.
- B. The converse of the conditional statement is: "If $x^2 = 36$, then $x = -6$."
- C. The converse of the conditional statement is true.
- D. The inverse of the conditional statement is: "If $x \neq -6$, then $x^2 \neq 36$."

15. Which of the following statements is an example of deductive reasoning?

- A. Arlene sees two white kittens at the pet store. She reasons that all the kittens in the pet store are white.
- B. Ariel sees four customers at the pet store buy fish. She reasons that all customers at the pet store buy fish.
- C. Robert sees three birds at the pet store with yellow beaks. He reasons all birds at the pet store have yellow beaks.
- D. Randy knows that there are more dogs than cats. He also knows there is more cats than hamsters. He reasons there are more dogs than hamsters.

16. A line parallel to $y = \frac{3}{4}x + 2$ and passing through $(0,0)$ has the equation

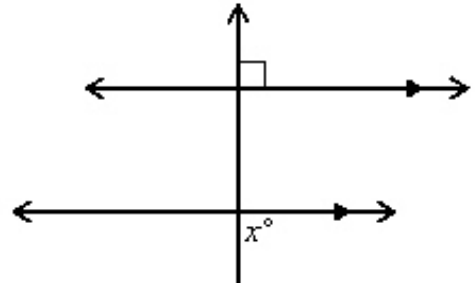
_____.

- A. $y = -\frac{3}{4}x$
- B. $y = -\frac{3}{4}x - 2$
- C. $y = \frac{3}{4}x - 2$

D. $y = \frac{3}{4}x$

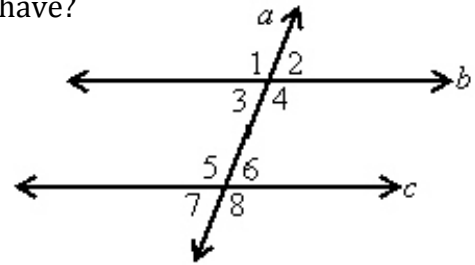
17. What is the value of x in the figure below?

- A. 100
- B. 90
- C. 45
- D. 80



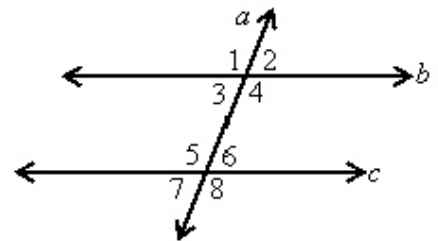
18. What type of angle relationship does $\angle 3$ and $\angle 5$ have?

- A. Alternate Interior Angles
- B. Consecutive Interior Angles
- C. Corresponding Angles
- D. Alternate Exterior Angles



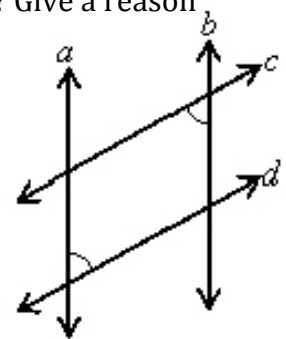
19. Which pair of angles in the figure to the right are alternate exterior angles?

- A. $\angle 1$ and $\angle 8$
- B. $\angle 1$ and $\angle 7$
- C. $\angle 2$ and $\angle 8$
- D. $\angle 2$ and $\angle 6$



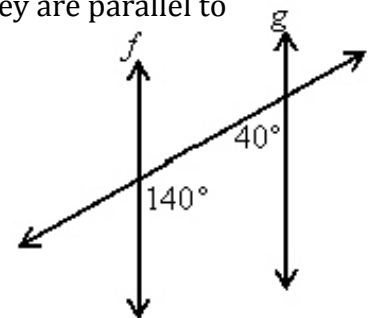
20. Which lines, if any, must be parallel based on the given diagram? Give a reason for your answer.

- A. $a \parallel b$; Alternate Interior Angles Converse
- B. $c \parallel d$; Alternate Interior Angles Converse
- C. $a \parallel b$ and $c \parallel d$; Alternate Interior Angles Converse
- D. No lines can be proved parallel from the given information.



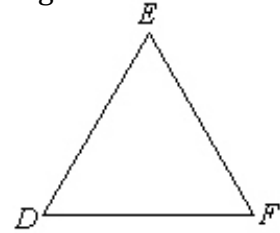
21. Which theorem would you use to show that $f \parallel g$?

- A. Corresponding Angles Postulate
- B. In a plane, if two lines are parallel to the same line then they are parallel to each other.
- C. Consecutive Interior Angles Theorem
- D. Alternate Interior Angles Theorem



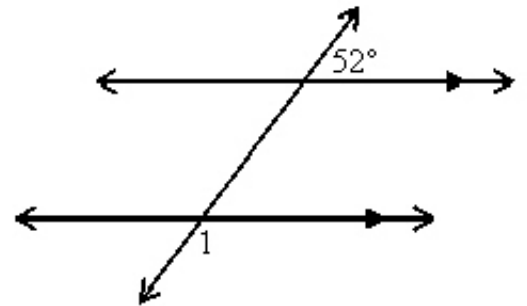
22. For the triangle to the right, $\angle DEF \cong \angle EFD$. What type of triangle must $\triangle DEF$ be?

- A. Scalene
- B. Right
- C. Acute
- D. Equilateral



23. A line parallel to $y = \frac{1}{4}x - 6$ is _____.

- A. $y = 4x - 3$
- B. $y = -\frac{1}{4}x - 2$
- C. $y = \frac{1}{4}x + 2$
- D. $y = -4x - 4$



24. Find $m\angle 1$ in the figure to the right.

- A. 52°
- B. 128°
- C. 38°
- D. 118°

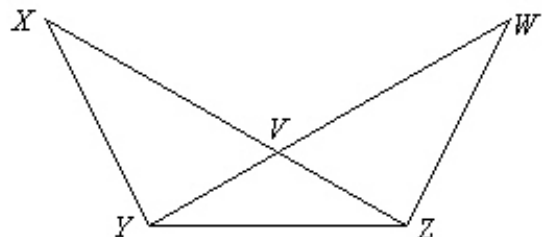
25. A line perpendicular to $y = -3x - 5$ is _____.

- A. $y = \frac{1}{3}x + 3$
- B. $y = -\frac{1}{3}x + 3$
- C. $y = 3x + 1$
- D. $y = -3x - 1$

26. Refer to the figure below. Give a congruence statement for two triangles

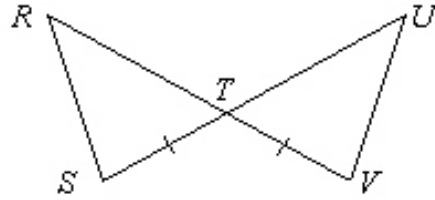
Given: $\overline{YV} \cong \overline{ZV}$, $\overline{VX} \cong \overline{VW}$

- A. $\triangle XYV \cong \triangle WZV$ by SSS
- B. $\triangle XYV \cong \triangle WZV$ by SAS
- C. $\triangle XYZ \cong \triangle WZY$ by SSS
- D. $\triangle XYZ \cong \triangle WZY$ by SAS



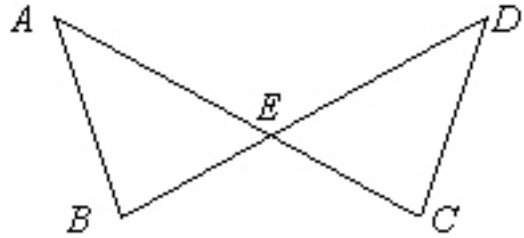
27. What must be true in order for $\triangle RST \cong \triangle UVT$ by the SAS Postulate?

- A. $\overline{TR} \cong \overline{TU}$
- B. $\overline{RS} \cong \overline{UV}$
- C. $\angle R \cong \angle U$
- D. $\angle S \cong \angle V$



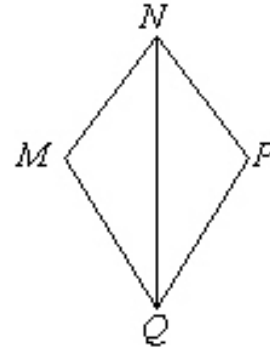
28. Given: $\overline{AB} \cong \overline{DC}$ and $\angle B \cong \angle C$. What postulate or theorem can be used to show that $\triangle ABE \cong \triangle DCE$?

- A. AAS
- B. ASA
- C. SAS
- D. SSS



29. Given: $\angle NQM \cong \angle NQP$ and $\angle MNQ \cong \angle PNQ$. What postulate or theorem is used to show that $\triangle NQM \cong \triangle NQP$?

- A. SSS
- B. AAS
- C. ASA
- D. SAS



30. In $\triangle XYZ$, if $\overline{XY} \cong \overline{YZ}$ and $m\angle X = 42^\circ$, then $m\angle Z =$ _____.

- A. 69°
- B. 42°
- C. 138°
- D. 21°

31. If $\triangle MNP \cong \triangle RST$, then $\overline{PM} \cong$ _____.

- A. \overline{TR}
- B. \overline{SR}
- C. \overline{RS}
- D. \overline{ST}

32. Given: $\triangle RST \cong \triangle XYZ$ with $\overline{RS} \cong \overline{TS}$. Which congruence statement is *not* provable?

- A. $\triangle RST \cong \triangle TSR$
- B. $\triangle XYZ \cong \triangle ZYX$
- C. $\triangle ZYX \cong \triangle RST$
- D. $\triangle RST \cong \triangle XYZ$