1) \( \angle c \) and \( \angle e \) are angles.
   (A) perpendicular
   (B) corresponding
   (C) complementary
   (D) alternate interior

2) On a map of Tennessee, one inch represents 15 miles. If Chattanooga and Nashville are 11.5 inches apart on the map, how many miles apart are the cities?
   (A) 26.5
   (B) 135.5
   (C) 165.5
   (D) 169.5
3) If angle A in the diagram equals 45 degrees and angle B is \( 4x + 5 \) degrees, determine the value of \( x \).

(a) 10 degrees  
(b) \( \frac{25}{2} \) degrees  
(c) 40 degrees  
(d) 500 degrees

4) Using only the markings in the diagram, what theorem can be used to prove that the triangles are congruent?

(a) AAA  
(b) AAS  
(c) SAS  
(d) SSS
Which theorem proves that the triangles are congruent?

(a) ASA
(b) SAS
(c) SSA
(d) SSS

Which reason explains the congruency of these two triangles?

(a) AAA
(b) HL
(c) SSS
(d) SSS

Which of the statements about the two triangles is correct?

(a) The triangles are congruent by AAA.
(b) These triangles are congruent by AAS.
(c) These triangles are congruent by SSS.
(d) These triangles are congruent by SSA.

Describe the transformation.
(a) reflection across the x-axis
(b) reflection across the y-axis
(c) translation 4 units to the right
(d) reflection across the line y = x

Describe the transformation.
(a) reflection across the x-axis
(b) reflection across the y-axis
(c) reflection across the line y = x
(d) reflection across the line y = -x

Which pair of angles are congruent?
(a) 1 and 8
(b) 4 and 6
(c) 5 and 6
(d) 1 and 7
11) Original Figure

Which transformation is the result of reflecting the original figure across the y-axis and then across the x-axis?

A) a
B) b
C) c

12) Angles h and c are called ______ angles.

A) complementary
B) linear
C) supplementary
D) vertical

13) \triangle ASH \cong \triangle RAT

Which statement is not necessarily true?

A) \angle MA = \angle TA
B) \angle MS = \angle TR
C) \angle M = \angle R
D) \angle M = \angle T

14) Given: line a is parallel to line b

Identify a pair of congruent alternate interior angles.

A) 3 & 6
B) 1 & 8
C) 2 & 5
D) 4 & 8
15) Determine which statement is true.
A) $u \parallel w$ and $v \parallel w$
B) $u \parallel w$ and $v \parallel u$
C) $u \parallel v$ and $u \parallel w$
D) $u \parallel v$ and $v \parallel w$

16) Which expression represents the perimeter of the rectangle shown in the diagram?
A) $pq$
B) $2p + 2q$
C) $p^2$
D) $4p$

17) Fill in the missing reason in the proof.
A) ASA
B) SSA
C) SAS
D) SSS

18) Given: $\triangle ABC \cong \triangle DEF$

Determine the perimeter of $\triangle ABC$. 

19) For which pair of triangles would you use SSS to prove the congruence of the 2 triangles?

A) 

B) 

C) 

D)
20) For which pair of triangles would you use AAS to prove the congruence of the 2 triangles?

A) 

B) 

C) 

D) 

21) 

Thomas is constructing an inscribed regular hexagon for the circle shown. Point A will be one vertex of the hexagon. What step should be completed next?

A) draw a ray from point P through A
B) construct a diameter of the circle
C) place a second point on the circle
D) set the width of the compass to equal AP

22) 

Elizabeth performed the geometric construction shown in the diagram. Based on her construction markings we can conclude that the polygon inscribed in the circle is:

A) a regular hexagon
B) a concave hexagon
C) an irregular hexagon
D) equilateral but not equiareal

23) 

A section of a roller coaster track forms a parallelogram ABCD.

If m∠ABC = 72°, what is m∠DAB?

A) 72°
B) 108°
C) 144°
D) 252°
In parallelogram ABCD, find m∠A.
A) 15°
B) 70°
C) 110°
D) 200°
25. To inscribe a hexagon inside a circle, to which length should you set your compass in order to draw the six vertices?
   (A) The radius
   (B) The diameter
   (C) Half of the radius
   (D) It depends on the size of the circle.

26. To inscribe a square inside a circle first you must draw a diameter anywhere across the circle. What should your next step be?
   (A) Construct a perpendicular bisector.
   (B) Draw a second diameter to the circle.
   (C) Construct a line tangent to the circle.
   (D) Set your compass the length of the radius.

27. The way to inscribe an equilateral triangle in a circle is to first inscribe a(n):
   (A) hexagon
   (B) octagon
   (C) pentagon
   (D) square.

28. Kate has started a construction that has this drawn on her paper. What is she constructing?
   (A) a square inscribed in a circle
   (B) a hexagon inscribed in a circle
   (C) a pentagon inscribed in a circle
   (D) an equilateral triangle inscribed in a circle