

- 1) What is a ratio, and how do you represent one?
- 2) In a rectangle, the ratio of the base to the height is 3:7. If the height of the triangle is 30 inches long, what is the base of the rectangle?
- 3) Of the 375 people who attended the drama department's show last night, 250 were teenagers, and the rest were adults. What is the ratio of teenagers to adults who attended the show?
- 4) Which conditions have to be met in order for two polygons to be similar?
- 5) If you have two triangles that are similar, and you are given the measures of two pairs of corresponding sides where one of the sides is unknown, what do you have to do to find the length of the missing side?
- 6) If triangle ABC is similar to triangle DEF, and $AB=12$, $DE=4$, $AC=14$, and $DF=x+9$, what is the value of x ? What is the scale factor between the sides?
- 7) $\triangle ABC$ and $\triangle CBD$ form $\triangle ABD$. $AB=24$, $BD=16$, $AC=2x+4$, $CD=2x$. Find the value of x .
- 8) In a right triangle, the measures of the legs are 3, x and 5, where 5 is across from the right angle. What is x ?
- 9) How do you know whether a set of measures could represent the sides of a triangle? Give an example of a set of numbers that would form a triangle, and another set of numbers that would not form a triangle.
- 10) In $\triangle ABC$, $m\angle A=60$, $m\angle B=30$, $AC=15$, and $AB=x$. What is the value of x ?
- 11) In $\triangle ABC$, $m\angle A=45$, $m\angle B=45$, $AB=18$, $AC=x$. What is the value of x ?
- 12) In $\triangle ABC$, $m\angle A=30$, $m\angle B=60$, $AB=25$, $AC=x$. What is the value of x ?
- 13) What is the acronym to remember the trigonometric ratios? How do you decide which ratio to use?
- 14) How do you find the measure of a missing angle in a right triangle, if you are given the measure of two of the sides?
- 15) $\triangle ABC$ is a right triangle, with angle C being the right angle. $BA=65$, $AC=62$, $BC=20$. What is the $\cos A$?
- 16) $\triangle ABC$ is a right triangle, with angle C being the right angle. $m\angle B=39$, $AC=x$, $AB=12$. What is x ?
- 17) $\triangle ABC$ is a right triangle, with angle C being the right angle. $m\angle A=x$, $AB=14$, $AC=8$. What is x ?
- 18) What is an angle of elevation? How do you find an angle of elevation?
- 19) If the sun casts a shadow 38 feet long from a tree that is 21 feet tall, what is the angle of elevation?
- 20) What is a diameter?
- 21) How do you find the circumference?
- 22) The diameter of a circular pond is 27 feet. What is the circumference of the pond rounded to the nearest hundredth?
- 23) What is a central angle?
- 24) What is the relationship between the measure of the central angle and the arc that it intersects in a circle?
- 25) What is a semicircle (include its measure)?
- 26) In circle A, $\angle CAB$ is a central angle that intersects arc CB, and arc CB forms a semicircle with arc BD. If $m\angle CAB=55$, what is the measure of arc BD?
- 27) What is the difference between the measure and the length of an arc?
- 28) How do you find the length of an arc?
- 29) In circle A, $\angle CAB$ is a central angle that intersects arc CB, and $m\angle CAB=48$. What is the length of arc CB rounded to the nearest hundredth?
- 30) What is a chord in a circle?
- 31) What is the relationship between chords that are equidistant to the center of the circle?
- 32) If a radius, diameter (or part of a radius or diameter) is perpendicular to a chord, what does the radius or diameter do to the chord and the arc intersected by that arc?
- 33) What is an inscribed angle?
- 34) What is the relationship between an inscribed angle and the arc that it intersects?
- 35) $\angle ABC$ is an inscribed angle that intersects arc AC. If the measure of arc AB is 85, and the measure of arc BC is 95, what is the $m\angle ABC$?
- 36) If a quadrilateral is inscribed in a circle, what is the relationship between the angles that are opposite of each other?
- 37) What is a tangent in a circle?
- 38) What is the relationship between two tangents that originate from the same exterior point?
- 39) What is the equation of a circle?
- 40) What is the equation of a circle that has a center at (3, -5) and radius of 8?
- 41) If you are given a circle drawn in a coordinate plane, how would you find the equation of the circle?