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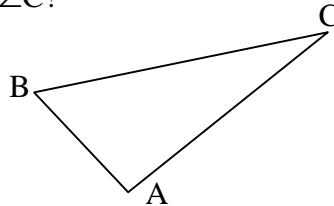
Pts:

Technical Math Mod C → Geometry
Lesson 4 - Study Guide - Triangles

1) True or False? A triangle is a figure formed by 3 segments connecting 4 coplanar points.

2) Which segment is included by $\angle B$ and $\angle C$?

- A. \overline{AC}
- B. \overline{AB}
- C. \overline{BC}

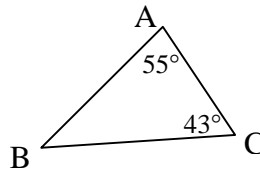


3) How many acute angles does a right triangle contain?

4) Fill in the blank. An isosceles triangle has _____ congruent angles

- A. Three
- B. Zero
- C. Two

5) What is the measure of $\angle B$?



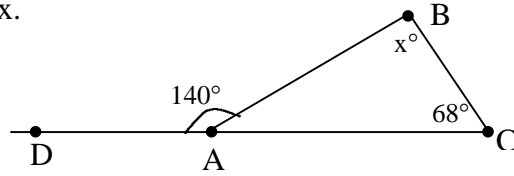
6) Which of the following is a congruence transformation?

- A. translating
- B. shrinking
- C. stretching

7) Rotating a triangle by 50° will change the measures of the exterior angles by _____.

- A. -50°
- B. 0
- C. 50°

8) Find the value of x .

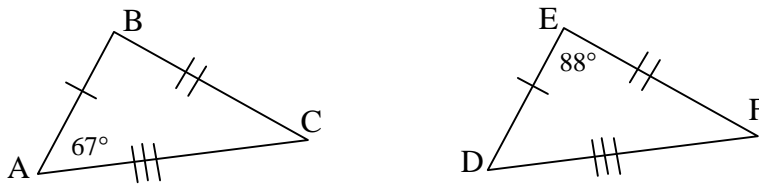


9) Given that $\triangle ABC \cong \triangle DEF$, $m\angle A = 70^\circ$, and $m\angle B = 65^\circ$, find $m\angle F$.

10) Which of the following are not congruence theorems or postulates? Circle all that apply.

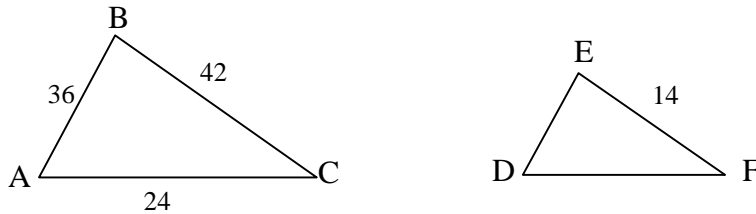
- A. SSS B. SAS C. SSA
 D. AAS E. ASA F. AAA

11) Given that $\triangle ABC \cong \triangle DEF$, find the measure of $\angle F$.

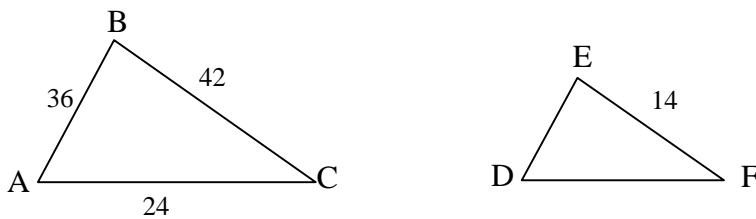


12) True or False? If two triangles have two pairs of congruent sides, then the triangles are guaranteed to be similar.

13) If $\triangle ABC \sim \triangle DEF$, what is the length of \overline{DE} ?

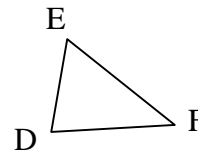
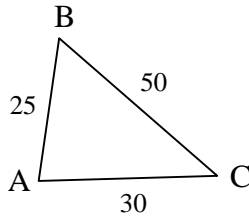


14) Given that $\triangle ABC \sim \triangle DEF$, what is the scale factor of $\triangle ABC$ to $\triangle DEF$?



15) If $\triangle ABC \sim \triangle DEF$ and the scale factor from $\triangle ABC$ to $\triangle DEF$ is 5, what are the lengths of \overline{DE} , \overline{EF} , and \overline{DF} , respectively?...

- A. 20, 45, 25
- B. 125, 250, 150
- C. 5, 10, 6
- D. 30, 55, 35



16) True or False? In the given ratio, "B" and "C" are mean values.

$$\frac{A}{B} = \frac{C}{D}$$

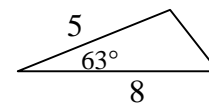
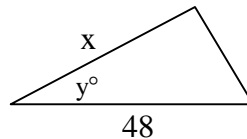
17) Find the value of x in the given ratio.

$$\frac{9}{5} = \frac{3x}{10}$$

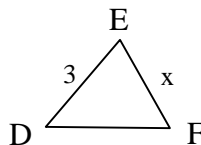
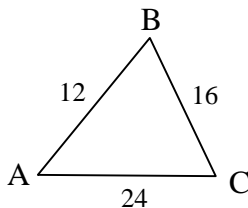
18) If a high school with 564 students wanted a ratio of 12 students per teacher, how many teachers would they need?

19) To make the two triangles below similar, what would the values of x and y have to be?

- A. $x = 6, y = 31.5^\circ$
- B. $x = 5, y = 63^\circ$
- C. $x = 30, y = 31.5^\circ$
- D. $x = 30, y = 63^\circ$

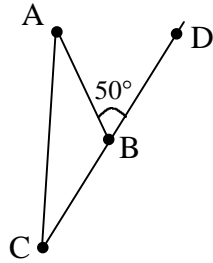


20) Given that $\triangle ABC \sim \triangle DEF$, solve for x.



21) True or False? In a scalene triangle, the shortest side is opposite the angle with the largest measure.

22) Given the diagram below, what must $\angle C$ measure in order for $\triangle ABC$ to be isosceles?



23) What is the name of the point at which all of a triangle's perpendicular bisectors intersect?

- A circumcenter
- B centroid
- C orthocenter

24) Check all that apply. The center of gravity of a triangular solid with uniform thickness and density is ...

- A the centroid
- B the point shared by a triangle's altitudes
- C the circumcenter
- D the point shared by a triangle's medians

25) What value of x would make segments \overline{BC} and \overline{CD} congruent?

