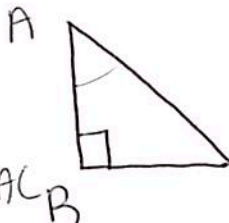


MIXED PRACTICE/QUIZ REVIEW!

1. Given $\triangle ABC$ with $m\angle B = 90^\circ$. Match the following by placing the correct corresponding # in the blank.

a) 5 Opposite Leg to $\angle A$ BC 

b) 1 Sine Ratio of $\angle C$ $\frac{AB}{AC}$

d) 6 The Longest Side (Hypotenuse) AC

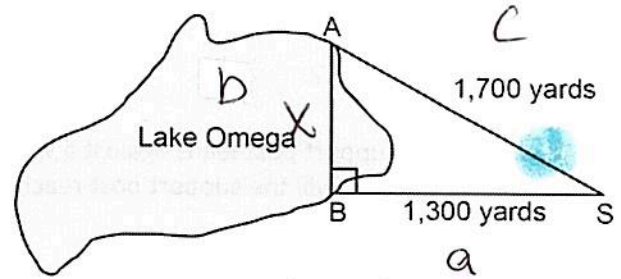
e) 4 Adjacent Leg to $\angle A$ AB

f) 2 Tangent Ratio of $\angle C$ $\frac{AB}{BC}$

g) 3 Reference angle if $\frac{BC}{AC}$ is the Cosine Ratio. $\cos C = \frac{BC}{AC}$

1. $\frac{AB}{AC}$ 4. \overline{AB}
 2. $\frac{AB}{BC}$ 5. \overline{BC}
 3. $\angle C$ 6. \overline{AC}

2. Campsite A and campsite B are located directly opposite each other on the shores of Lake Omega, as shown in the diagram below. The two campsites form a right triangle with Sam's position, S. The distance from campsite B to Sam's position is 1,300 yards, and campsite A is 1,700 yards from his position.



What is the distance from campsite A to campsite B, to the nearest yard?

- 1) 1,095
- 2) 1,096
- 3) 2,140
- 4) 2,141

$$1300^2 + x^2 = 1700^2$$

$$1,690,000 + x^2 = 2,890,000$$

$$\sqrt{x^2} = \sqrt{1,200,000}$$

$$x = 1095.4 \approx 1095$$

a
 2 sides given =
 Pythag. Theorem

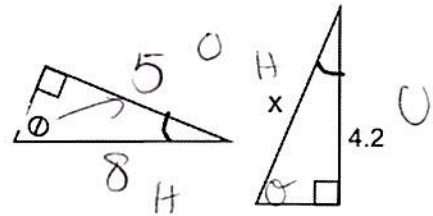
3. The diagram below shows two similar triangles. If $\sin \theta = \frac{5}{8}$, what is the value of x, to the nearest tenth?

$$\frac{SO}{H} \sim \frac{A}{A} \sim \frac{T}{A}$$

$$\frac{5}{8} = \frac{4.2}{x}$$

$$5x = 33.6$$

$$\boxed{x = 6.7}$$

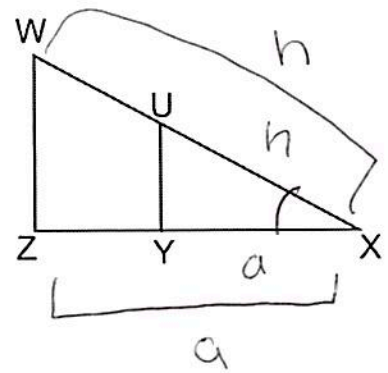


4. In the diagram of right triangle WXZ below, $\overline{WZ} \parallel \overline{UY}$. Which ratio is always equivalent to the cosine of $\angle X$?

- 1) $\frac{UX}{YX}$
- 2) $\frac{WX}{ZX}$
- 3) $\frac{ZX}{WX}$
- 4) $\frac{YX}{WX}$

sm. Δ = Big Δ

$$\cos X = \frac{YX}{UX} = \frac{ZX}{WX}$$

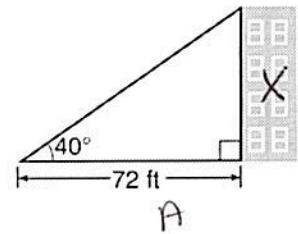


As shown in the diagram below, a building casts a 72-foot shadow on the ground when the angle of elevation of the Sun is 40° . How tall is the building, to the nearest foot?

$$\frac{\tan 40}{1} = \frac{x}{72}$$

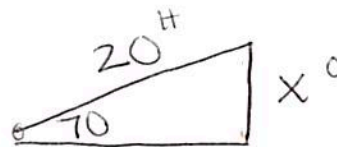
$$x = 72 \tan 40$$

$$x = 60.4151 \approx \boxed{60 \text{ ft}}$$



6. A 20-foot support post leans against a wall, making a 70° angle with the ground. To the nearest tenth of a foot, how far up the wall will the support post reach?

- 1) 6.8
- 2) 6.9
- 3) 18.7
- 4) 18.8



$$\frac{\sin 70}{1} = \frac{x}{20}$$

$$x = 20 \sin 70$$

$$x = 18.8$$

7. A ladder leans against a building that is perpendicular to the ground such that it makes a 74° angle with the ground and its bottom lies 2.75 feet from the base of the building. Determine the height that the ladder reaches up the wall to the nearest tenth of a foot.

$$\frac{\tan 74}{1} = \frac{x}{2.75}$$

$$x = 2.75 \tan 74$$

$$x = 9.6 \text{ ft}$$

