Name: _____

Date: _____ Period: _____
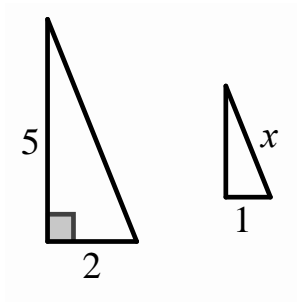
SECONDARY MATH II

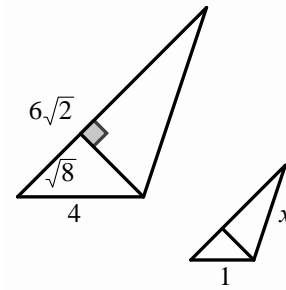**Module 6 Study Guide: Similarity & Right Triangle Trigonometry**

Directions: Show ALL work. Round any decimals to one decimal place, unless otherwise stated.

  For 1-3: Find the missing side for the similar shapes that are shown below.
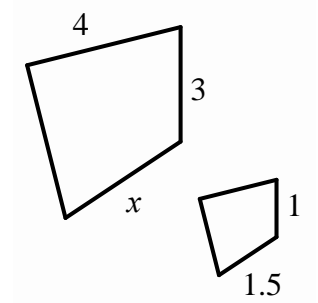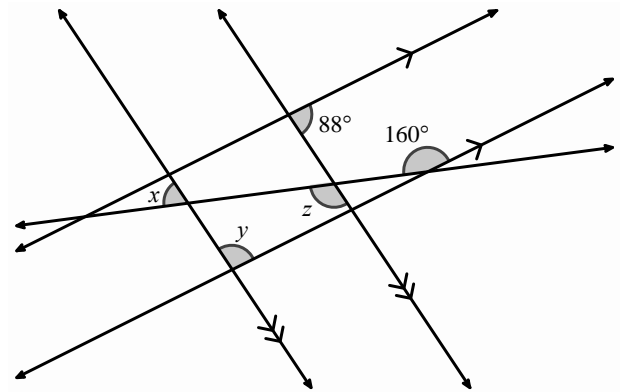
1.

5

2

x

1

2.

$6\sqrt{2}$

$\sqrt{8}$

4

x

1

3.

4

3

x

1

1.5

4.   Find the measurements of angles x, y, z.

88°

160°

x

y

z

5.   Find each trig ratio below, given ΔABC to the right.

$sinA =$
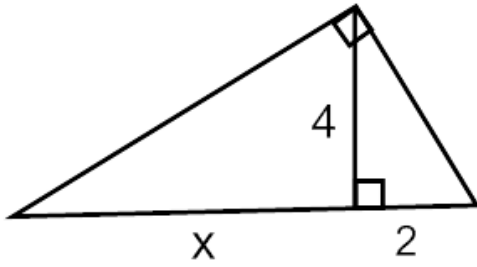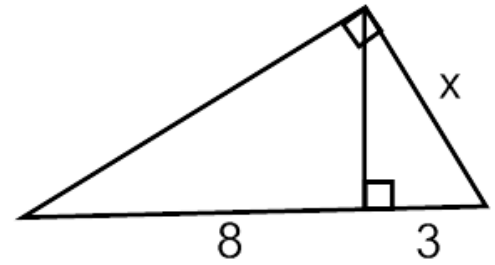
$cosA =$

$tanA =$

$sinB =$
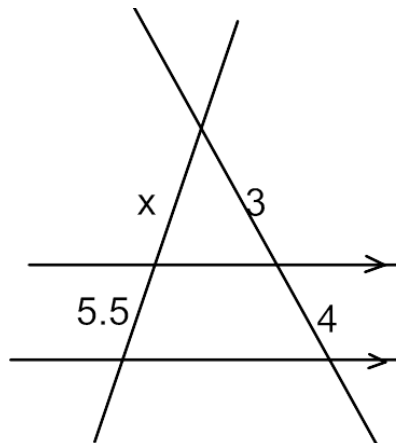
$cosB =$

$tanB =$

A

5

3

C

4

B
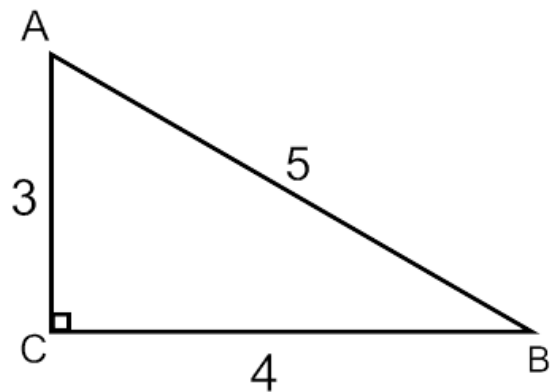
6. Set up a proportion and solve for x.
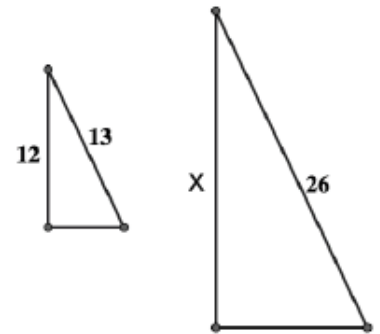

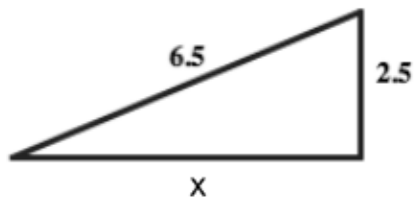7. Set up a proportion and solve for x.

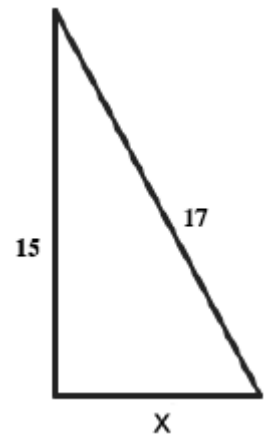8. Set up a proportion and solve for x.

9. Set up a proportion and solve for x.

10. Find the missing side length, x.

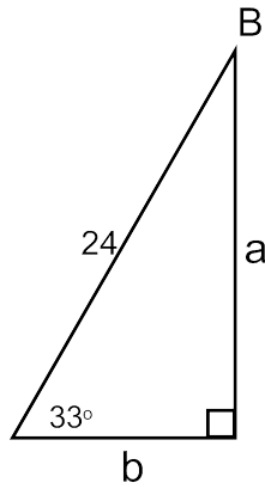11. Find the missing side length, x.

12. Find the coordinates of the midpoint, M, of a line segment between (0,6) and (8,2).

13. Find the coordinates of the midpoint, M, of a line segment between (-4,5) and (3,-6).

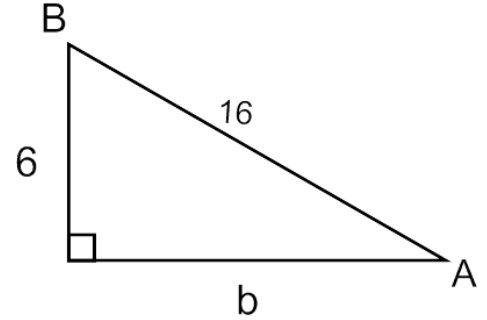14. Find all missing side lengths and angle measures.

$m\angle B =$

$a =$

$b =$

B

24 / a

33° b

15. Find all missing side lengths and angle measures.

$m\angle A =$

$m\angle B =$

$b =$

B

6 16

b

A

Find the missing angle or side length given the trigonometric ratio below.

16. $sinB = 0.67$

17. $cos(53°) = \frac{x}{6}$

18. $tanA = 1.2$

For the following, draw a picture, set up a trig ratio, and solve for the missing angle or side length.

19. John places a 12 foot ladder against the side of a building. If the ladder makes an angle of elevation with the ground of 62°, how far up the side of the building is the ladder?

20. In southern Utah, there is a 10 mile stretch of I-15 that increases 1.6 miles. What is the angle of elevation?