Distance Learning: Week of 20 April 2020:

Assignments are accessible through YouTube videos. I will post the YouTube url's each day through the Remind app. You can also receive them by e-mail. Work can be submitted through Remind and e-mail, which I highly encourage. You can sign up for Remind by texting the message @whet-alg1 to the number 81010. You can also contact me through e-mail at swhetstone@tusd.net.

My office hours are 10 am – 12 pm, M–F. You can contact me with questions either through Remind or by e-mail. Please check your Remind messages regularly.

Topic: Right Triangle Trigonometry & Radian Measures

Monday: 20 April 2020

Lesson 17.0
OTL#138
    Trig. Review Worksheet (Lesson 17.0) (see attachment), #1-24

Tuesday: 21 April 2020

Lesson 17.0
OTL#139
    More Trig. Review Worksheet (Lesson 17.0) (see attachment), #1-24

Wednesday: 22 April 2020

Lesson 17.0
OTL#140
    Solving Right Triangles Worksheet (Lesson 17.0) (see attachment), #1-6

Thursday: 23 April 2020

    Lesson 17.1
    OTL#141
       Lesson 17.1—Radians Worksheet (see below)

Friday: 24 April 2020

    Lesson 17.1
    OTL#142
       pg. 833, #1-14

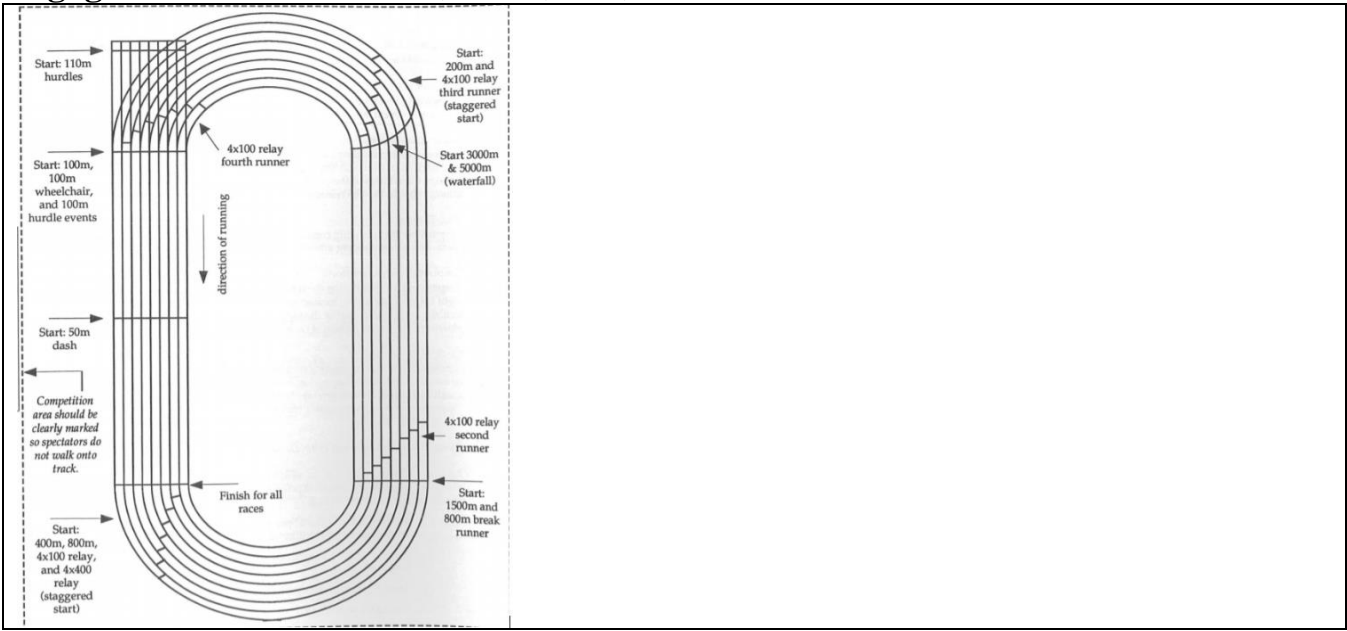Other resources that can help are…

    Khan Academy videos on right triangle trigonometry and radian measures.

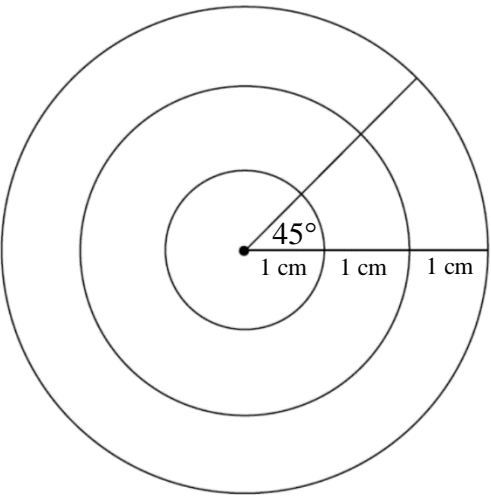   YouTube videos on right triangle trigonometry and radian measures.

    "Algeomulus Prep. Academy" videos (West High student-made!!).
    https://youtu.be/M2Y1lSB1vaE

Algebra 2 Pre-AP
Notes: Lesson 17.1 - Radians
Engage: 200m Dash – Think, Write, Pair, Share

Explore: Concentric Circles and Arc Lengths

	Radius	Circumference in terms of π	Minor Arc Length	Ratio of Arc Length to Radius
Small Circle	1 cm			
Medium Circle	2 cm			
Large Circle	3 cm			

Definition of a Radian Measure:

For the unit circle (a circle with a radius of 1 unit), plot each point on the circle and find the corresponding radian measure in terms of π.

Point	Angle Measure	Radian Measure
A	0°	
B	30°	
C	45°	
D	60°	
E	90°	
F	180°	
G	360°	

1 unit
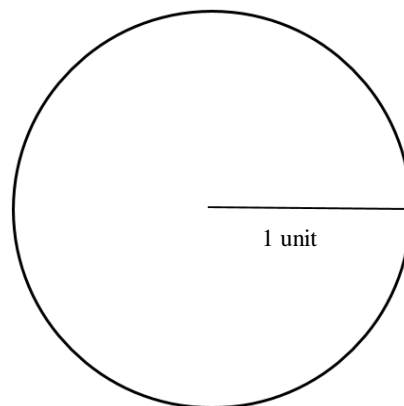
Explain: Formal Conversion between Degrees and Radians

Angle Measure	Radian Measure
d	r
180°	

Checking for Understanding: Plot each point on the Unit Circle. Convert from degrees to radians or vice versa.

A. 135°

B. 20°

C. 36°

D. $\dfrac{1}{9}\pi$

E. $\dfrac{5}{6}\pi$

F. $\dfrac{17}{12}\pi$

Challenge!

G. 1

H. $\pi°$
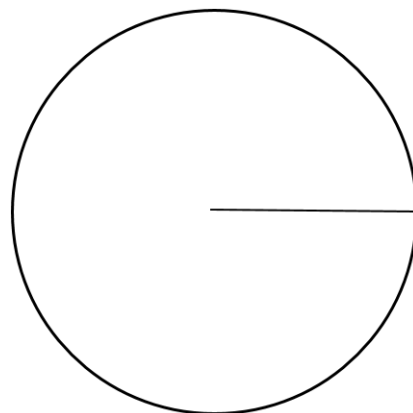
Evaluate:

Plot each point on the Unit Circle. Convert from degrees to radians or vice versa. ***Show all work at the bottom and on the back.***

Point	Degree	Radians
A	0°	
B	10°	
C	30°	
D		$\dfrac{2}{9}\pi$
E		$\dfrac{\pi}{4}$
F	50°	
G		$\dfrac{\pi}{3}$
H	76°	
I	90°	
J		$\dfrac{5}{9}\pi$
K	120°	
L	125°	
M		$\dfrac{3}{4}\pi$
N		$\dfrac{4}{5}\pi$
O		$\dfrac{5}{6}\pi$
P		$\dfrac{9}{10}\pi$
Q	180°	
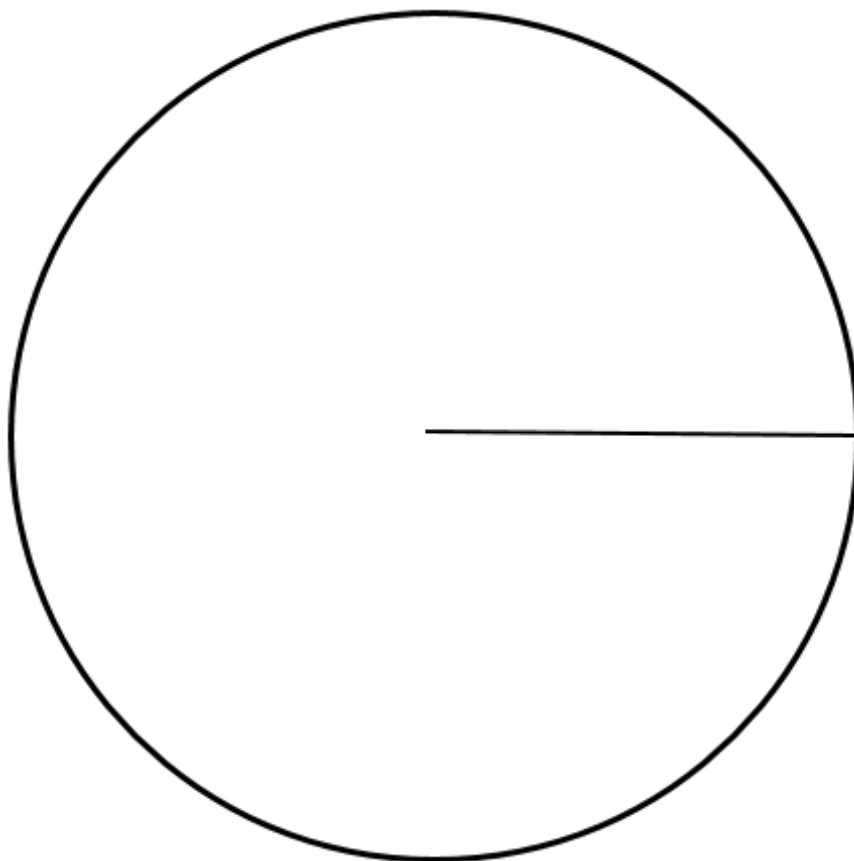
OTL# ___ More Trigonometry Review   **SHOW ALL WORK!!**

Find the missing side lengths. Leave your answers as radicals in simplest form.
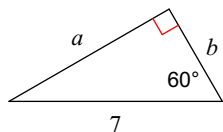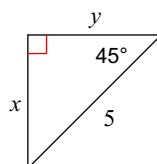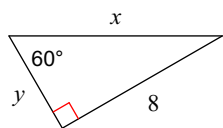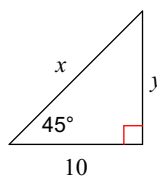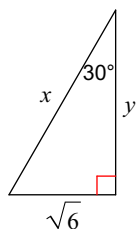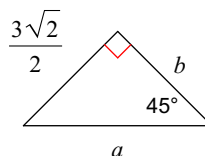
1)

a b $60°$ 7

2)

y $45°$ x 5

3)

x $60°$ y 8

4)

x y $45°$ 10

5)

$30°$ x y $\sqrt{6}$

6)

$\dfrac{3\sqrt{2}}{2}$ b $45°$ a

Find the missing side of each triangle. Leave your answers in simplest radical form.

7)

4 m x 16 m

8)

x 9 km 13 km

9)

6 m x 9 m

10)

x 14 cm $\sqrt{82}$ cm

Find the value of each trigonometric ratio.

11) sin *X*

12) cos *A*

13) tan *X*
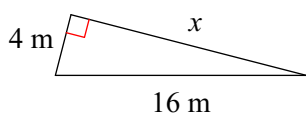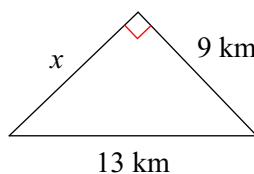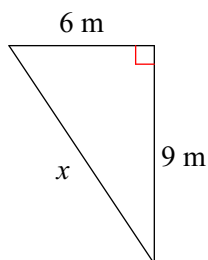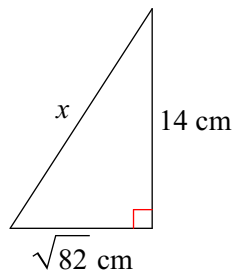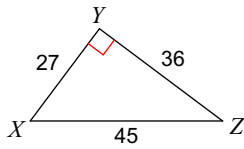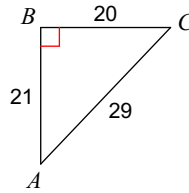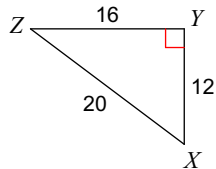
14) cos *Z*

Find the missing side. Round to the nearest tenth.

15)

16)

17)

18)

Find the measure of the indicated angle to the nearest tenth of a degree.

19)

20)

21)

22)
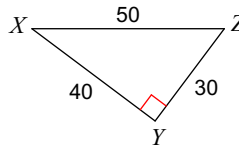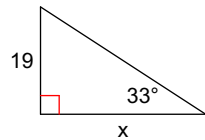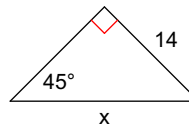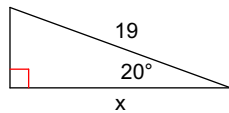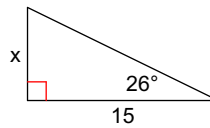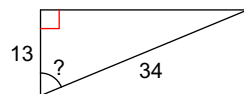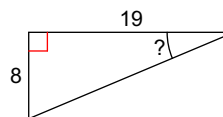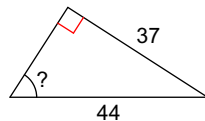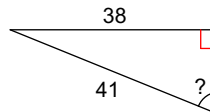
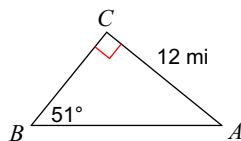**Find the area of each figure. Round your answer to the nearest tenth.**
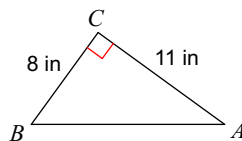
23)
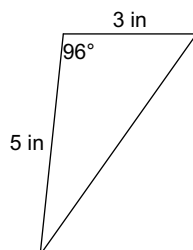
24)
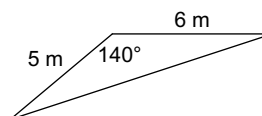
OTL# _____ Solving Right Triangles
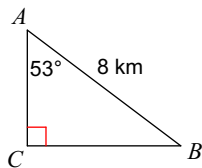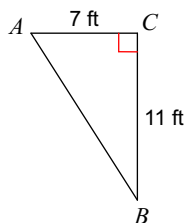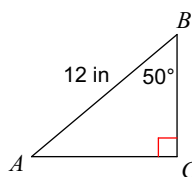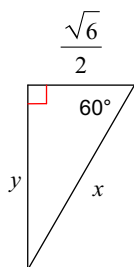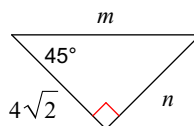
SHOW ALL WORK!!

Solve each triangle. Round answers to the nearest tenth.

1)

C — 12 mi
51°
B — A

2)

C
8 in — 11 in
B — A

3)

A
53° 8 km
C — B

4)

B — 8.5 yd
3 yd
C — A

5)

A — 7 ft — C
11 ft
B

6)

B
12 in — 50°
A — C

OTL# ___ Trigonometry Review

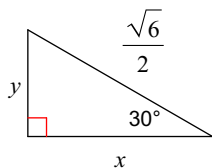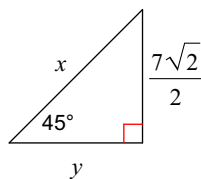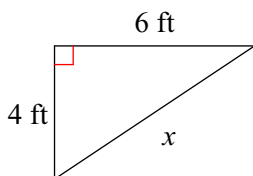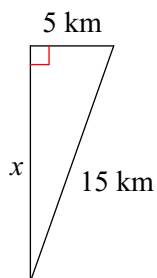**Find the missing side lengths. Leave your answers as radicals in simplest form.**

1)

$\dfrac{\sqrt{6}}{2}$

60°

y

x

2)

m

45°

$4\sqrt{2}$

n

3)

x

y

30°

10

4)

$10\sqrt{3}$

x

45°

y

5)

$\dfrac{\sqrt{6}}{2}$

y

30°

x

6)

x

$\dfrac{7\sqrt{2}}{2}$

45°

y

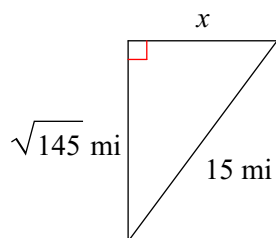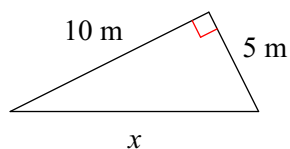**Find the missing side of each triangle. Leave your answers in simplest radical form.**
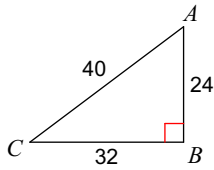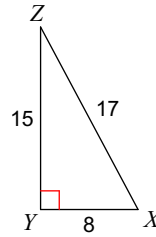
7)

6 ft

4 ft

x

8)

5 km

x

15 km

9)

x

$\sqrt{145}$ mi

15 mi

10)

10 m

5 m

x

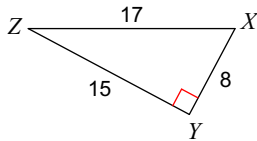**Find the value of each trigonometric ratio.**
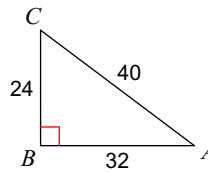
11) cos *A*

12) sin *Z*
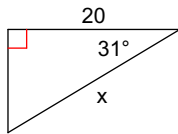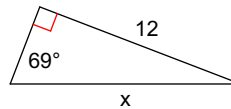

13) tan *X*

14) sin *C*

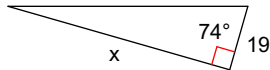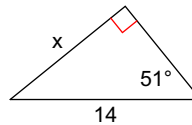**Find the missing side. Round to the nearest tenth.**

15)

16)

17)

18)

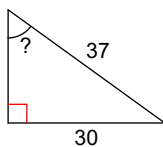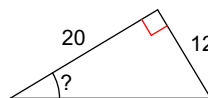**Find the measure of the indicated angle to the nearest tenth of a degree.**

19)

20)

21)

22)

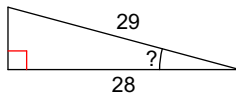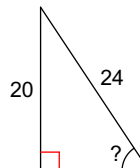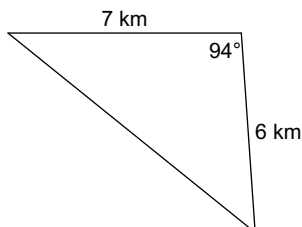**Find the area of each figure. Round your answer to the nearest tenth.**

23)

24)