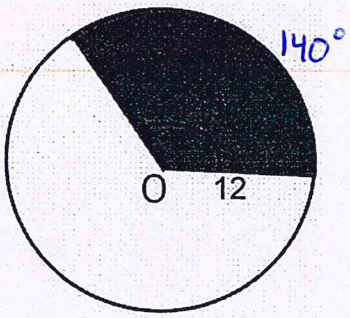
Bellwork Alg 2 Tuesday, March 26, 2019

1. Convert each angle into the other unit of measure. Round degrees to the nearest tenth and leave radians in terms of π and in reduced form.

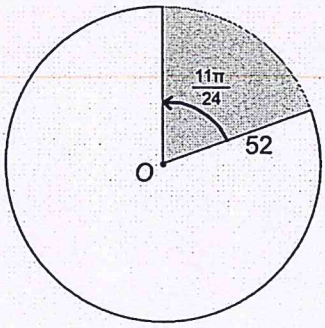
a) $6300°$ b) $\frac{13\pi}{36}$ c) $275°$ d) $\frac{19\pi}{25}$

2. Find the area of the shaded region in each circle to the nearest hundredth.

a.



b.



3. The table below classifies 103 elements as metal, metalloid, or nonmetal and as solid, liquid, or gas at standard temperature and pressure.

	Solids	Liquids	Gases	Total
Metals	77	2	0	78
Metalloids	7	0	0	7
Nonmetals	6	1	11	28
Total	90	2	11	103

a) What fraction of all solids and liquids in the table are metalloids?

b) If an element is picked at random what is the probability that it is a metal that is a liquid?

c) Find the probability that a you randomly select a Nonmetal and it is a Solid.

4. In your drawer at home are the following sox: 6 white and 4 blue. You wake up late and grab a sock at random and put it on then grab another sock at random and put it on. Find the probability that you grabbed 2 white socks.

Bellwork Alg 2 Tuesday, March 26, 2019 ANSWERS

1. Convert each angle into the other unit of measure. Round degrees to the nearest tenth and leave radians in terms of π and in reduced form.

a) $6300^\circ \cdot \frac{\pi}{180^\circ}$ $= \boxed{35\pi}$

b) $\frac{13\pi}{36} \cdot \frac{180^\circ}{\pi}$ $= \boxed{65^\circ}$

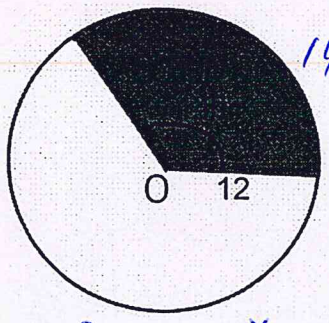
c) $275^\circ \cdot \frac{\pi}{180}$ $= \boxed{\frac{55\pi}{36}}$

d) $\frac{19\pi}{25} \cdot \frac{180}{\pi}$ $= \boxed{136.8^\circ}$

2. Find the area of the shaded region in each circle to the nearest hundredth.

$\frac{\text{area of shaded}}{\text{area of circle}} = \frac{\text{angle of shaded}}{\text{angle of circle}}$

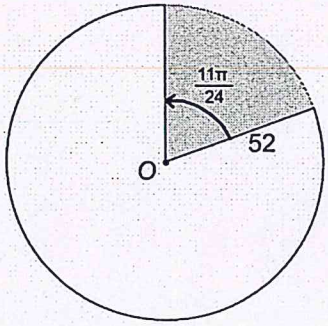
a.



$\frac{140^\circ}{360^\circ} = \frac{x}{\pi(12)^2}$

$\boxed{x = 175.93}$

b.



$\frac{11\pi}{24} \cdot \frac{1}{2\pi} = \frac{x}{\pi(52)^2} \rightarrow \frac{11}{48} = \frac{x}{\pi(52)^2}$

$\boxed{x = 1946.74}$

3. The table below classifies 103 elements as metal, metalloid, or nonmetal and as solid, liquid, or gas at standard temperature and pressure.

	Solids	Liquids	Gases	Total
Metals	77	2	0	78
Metalloids	7	0	0	7
Nonmetals	6	1	11	28
Total	90	2	11	103

a) What fraction of all solids and liquids in the table are metalloids?

$\frac{7}{92}$

b) If an element is picked at random what is the probability that it is a metal that is a liquid?

$\frac{2}{103}$

c) Find the probability that a you randomly select a Nonmetal and it is a Solid.

$\frac{6}{28}$

4. In your drawer at home are the following sox: 6 white and 4 blue. You wake up late and grab a sock at random and put it on then grab another sock at random and put it on. Find the probability that you grabbed 2 white socks.

TOTAL # SOCKS = 10

1st sock 2nd sock

$\frac{6}{10} \cdot \frac{5}{9} = \boxed{\frac{30}{90} \text{ or } \frac{1}{3}}$