

## SM2 HW #8-5 (arcs and sectors)

Convert each degree measure into radians.

1)  $150^\circ$

2)  $120^\circ$

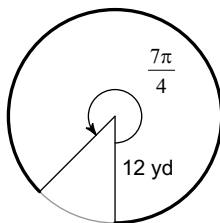
Convert each radian measure into degrees.

3)  $\frac{13\pi}{18}$

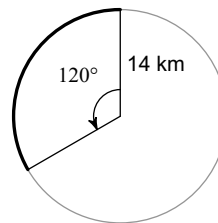
4)  $\frac{7\pi}{6}$

Find the length of each arc (exact answer with a reduced fraction).

5)

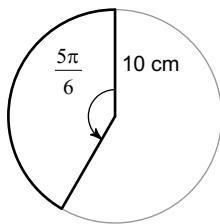


6)

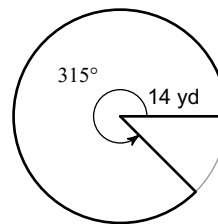


Find the area of each sector. (Exact answer with reduced fraction)

7)

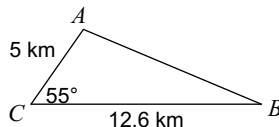


8)



Find the area of each triangle to the nearest tenth.

9)



Use the information provided to write the "center of the circle" form equation of each circle.

10)  $x^2 + y^2 + 16x + 18y + 109 = 0$

Simplify. Your answer should contain only positive exponents.

11)  $yx^2 \cdot 2x^3y^3 \cdot 4xy^2$

12)  $(4xy^{-4})^3$

13)  $\frac{3u^3v^4}{2u^2v^{-4}}$

Where is the vertex of the graph?

14)  $y = -2|x - 3| - 1$

a) Domain = ?

b) Range = ?

15)  $y = -3\sqrt{x-4} + 3$

Write each expression in exponential form.

16)  $(\sqrt[6]{2n})^7$

Write the slope-intercept form of the equation of the line through the given points.

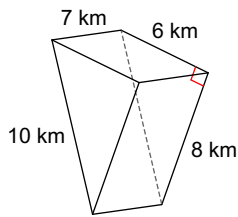
17) through:  $(3, 1)$  and  $(-3, -4)$

Simplify.

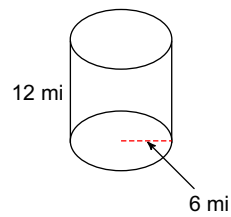
18)  $6\sqrt[5]{160x^6y^8}$

Find the surface area of each figure. Round your answers to the nearest hundredth, if necessary.

19)

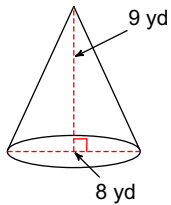


20)

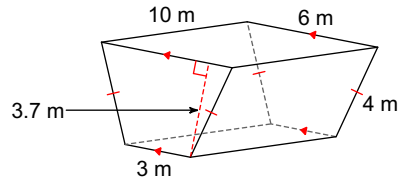


Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

21)

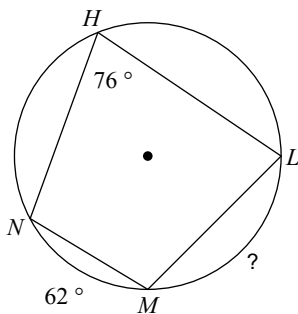


22)



Find the measure of the arc or angle indicated.

23)



24)

