

Week 10 Math 1508 Worksheet

1. Evaluate the following by simplifying

a. $\frac{12in^2}{5} \cdot \frac{15}{24in}$

b. $\frac{3\pi}{2} \cdot \frac{180^\circ}{\pi}$

c. $45^\circ \div \frac{180^\circ}{\pi}$

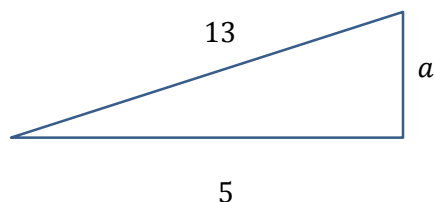
2. Perform the following conversions

a. Convert 28 feet to meters ($1 \text{ foot} = 0.3048 \text{ meters}$)

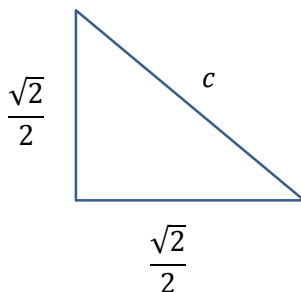
b. Convert 6.85 liters into quarts ($1 \text{ liter} = 1.057 \text{ quarts}$)

c. Convert 270° into radians ($1 \text{ radian} = 180^\circ$)

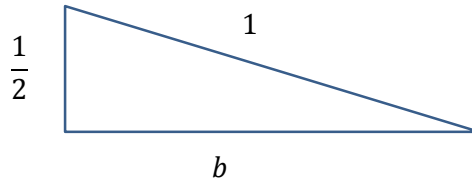
3. Use Pythagorean Theorem to solve for the missing side. Give exact solutions.



4. Use Pythagorean Theorem to solve for the missing side. Give exact solutions. Discuss the three interior angles of the right triangle.



5. Use Pythagorean Theorem to solve for the missing side. Give exact solutions. Discuss the three interior angles of the right triangle.



6. True or False [You must justify your answer mathematically]
- In each of the four quadrants, the signs of the secant function and sine function are the same.
 - $\tan^2\left(\frac{\pi}{6}\right) = \left(\tan\left(\frac{\pi}{6}\right)\right)^2$
 - $\frac{\sin 60^\circ}{\sin 20^\circ} = \sin 2^\circ$
 - $\sec 30^\circ = \csc 60^\circ$