1. The area of a circle is given by the formula \( A = \pi r^2 \), where \( r \) is the radius. What is the area of a circle of radius \( r = 5 \)? Round your answer to four decimal places.

2. The area of an ellipse is given by the formula \( A = \pi ab \), where \( a \) and \( b \) are the minor and major radii (don’t worry, if you don’t know what that means). Find the area of an ellipse, if the two radii are 3 and 5. Round your answer to six decimal places.

3. Solve the formula \( A = \pi ab \) for \( a \).

4. If the area of an ellipse is \( A = 15 \), and the major radius is \( b = 5 \), what is the length of the minor radius \( a \)?

5. The conversion formula for converting Fahrenheit to Celsius is \( C = \frac{5}{9}(F - 32) \). Convert 40°F to Celsius. Round to four decimal places (if needed).


7. The area of a trapezoid is given by the formula

\[
A = h \cdot \frac{b_1 + b_2}{2},
\]

where \( b_1 \) and \( b_2 \) are the lengths of the two bases, and \( h \) is the height. If you’re confused by the subscripts, use the letters \( a \) and \( b \). Solve for \( b_2 \) (or \( b \), if you changed letters).

8. If the area of a trapezoid is 20, the height is \( h = 4 \), and one of the bases is \( b_1 = 6 \), find the length of the other base.