

Scientific Scales Answer Key

- 1) 3.844×10^8
- 2) 3.2×10^{-6}
- 3) 0.00065
- 4) 8.849×10^3
- 5) 0.000000024
- 6) 9.1×10^8
- 7) 2.75×10^{-10}
- 8) 308,000
- 9) 4.5×10^{-5}
- 10) 0.00000072

Teacher's Guide

- Quick implementation tips
 - o Review the rules for moving the decimal point before students begin.
 - o Remind students that the coefficient must be at least 1 and less than 10.
 - o Encourage students to estimate whether the exponent should be positive or negative before writing the answer.
- Differentiation strategies
 - o Provide a place value chart for students who benefit from visual support.
 - o Pair students so they can explain each conversion before recording it.
 - o Challenge advanced students to identify the exponent mentally before moving the decimal.
- Engagement ideas
 - o Ask students to identify which measurements are microscopic and which are astronomical.
 - o Invite students to rank the measurements from smallest to largest after completing the conversions.
- Extension activities
 - o Have students research another scientific measurement and write it in both standard form and scientific notation.
 - o Ask students to create two new science-themed conversion problems for a classmate.