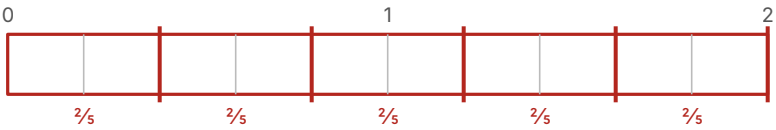
Dividing by Unit Fractions

ANSWER KEY • Amplify Alignment: Grade 6 Accelerated, Unit 3, Lesson 8

1. **Draw a tape diagram that represents the expression $2 \div \frac{2}{5}$. Then find its value.** 5



2. **Which expression represents the quotient of 8 and $\frac{1}{4}$?**

- (A) $8 \div \frac{1}{4}$
- B $8 \cdot \frac{1}{4}$
- C $\frac{1}{4} \div 8$
- D $\frac{1}{4} \cdot 8$

3. **Complete the expression so that it is equal to $\frac{1}{4} \div \frac{3}{8}$.**

$\frac{1}{4} \div \frac{3}{8} = \frac{1}{4} \cdot \frac{8}{3}$

4. **Select all the expressions that could be used to find the quotient of $\frac{1}{3}$ and $\frac{1}{8}$.**

- ☑ A. $\frac{1}{3} \div \frac{1}{8}$
- ☑ B. $\frac{1}{3} \cdot 8$
- ☑ C. $8 \cdot \frac{1}{3}$
- ☐ D. $\frac{1}{8} \cdot 3$
- ☐ E. $\frac{1}{8} \div \frac{1}{3}$
- ☐ F. $\frac{1}{3} \cdot \frac{1}{8}$

5. **Determine each quotient. Show your thinking.**

a $3 \div \frac{1}{7}$

$3 \cdot 7 = 21$

b $3 \div \frac{3}{7}$

$3 \cdot \frac{7}{3} = 7$

c $3 \div \frac{6}{7}$

$3 \cdot \frac{7}{6} = 3\frac{1}{2}$

6. **A centimeter ruler is shown. Each small tick is 1 millimeter, or one tenth of a centimeter.**



a $1 \div \frac{1}{10}$ **10**

b $4 \div \frac{1}{10}$ **40**

c $15 \div \frac{1}{10}$ **150**

7. **Ana says she can use the equation $2\frac{1}{4} \div \frac{1}{4} = 9$ to find $2\frac{1}{4} \div \frac{3}{4}$. She says the quotient will be tripled because $\frac{3}{4}$ is three times as much as $\frac{1}{4}$. Is Ana correct? Explain your thinking.**

No. When the divisor is 3 times as large, fewer groups fit, so the quotient is divided by 3: 9 ÷ 3 = 3, not 27.

8. **Raj says he can find $3 \div \frac{3}{4}$ by cutting 3 wholes into fourths and then making groups of 3 fourths. He says the quotient is 4. Is Raj correct? Explain your thinking.**

Yes. 3 wholes make 12 fourths. 12 fourths make 4 groups of 3 fourths, so $3 \div \frac{3}{4} = 4$.