



Name _____ Date _____

Dividing Mixed Numbers (pages 289–291)

When you divide mixed numbers, first rewrite the mixed numbers as improper fractions. Then divide as you would with a fraction—by multiplying by the reciprocal.

EXAMPLES

A Find the reciprocal of $4\frac{1}{5}$.

$$4\frac{1}{5} = \frac{21}{5} \text{ Rewrite as an improper fraction.}$$

Since $\frac{21}{5} \times \frac{5}{21} = 1$, the reciprocal of

$$4\frac{1}{5} \text{ is } \frac{5}{21}.$$

B Find $2\frac{2}{3} \div 3\frac{1}{2}$.

$$2\frac{2}{3} \div 3\frac{1}{2} = \frac{8}{3} \div \frac{7}{2} \text{ Rewrite mixed numbers as improper fractions.}$$

$$= \frac{8}{3} \times \frac{2}{7} \text{ Multiply by the reciprocal.}$$

$$= \frac{16}{21}$$

Try These Together

1. Find the reciprocal of $1\frac{5}{7}$.

HINT: Rewrite the mixed number as an improper fraction.

2. Find $3\frac{3}{5} \div 8\frac{1}{5}$.

HINT: Rewrite the mixed numbers as improper fractions. Multiply by the reciprocal.

PRACTICE

Write each mixed number as an improper fraction. Then write its reciprocal.

3. $7\frac{1}{6}$

4. $3\frac{1}{2}$

5. $1\frac{7}{8}$

6. $2\frac{4}{9}$

7. $5\frac{3}{5}$

8. $6\frac{1}{8}$

9. $2\frac{5}{8}$

10. $1\frac{4}{7}$

Find each quotient. Write in simplest form.

11. $2\frac{2}{5} \div 1\frac{1}{11}$

12. $3\frac{1}{6} \div \frac{1}{3}$

13. $1\frac{2}{3} \div 4$

14. $4\frac{1}{3} \div \frac{6}{7}$

15. $\frac{2}{5} \div 1\frac{1}{12}$

16. $3\frac{1}{10} \div 2\frac{1}{5}$

17. $2\frac{4}{9} \div 1\frac{1}{9}$

18. $4\frac{1}{2} \div 2\frac{2}{5}$

19. $2\frac{1}{8} \div \frac{1}{2}$



20. Standardized Test Practice A sand mosaic requires $\frac{1}{4}$ cup of sand per

project. If there are $3\frac{3}{4}$ cups of sand available, how many mosaics can be completed?

A 9

B 12

C 15

D 18

Answers: 1. $\frac{12}{7}$	2. $\frac{18}{41}$	3. $\frac{43}{6}$	4. $\frac{7}{2}$	5. $\frac{15}{8}$	6. $\frac{22}{9}$	7. $\frac{5}{28}$	8. $\frac{8}{49}$	9. $\frac{8}{21}$	10. $\frac{11}{7}$	11. $\frac{21}{5}$	12. $\frac{9}{2}$	13. $\frac{5}{12}$	14. $5\frac{1}{1}$	15. $\frac{65}{24}$	16. $1\frac{22}{9}$	17. $2\frac{5}{1}$	18. $1\frac{7}{8}$	19. $4\frac{1}{4}$	20. C
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