math Antics Worksheets

Name: _____

Date: _____

Finding the Reciprocal

F-DIV 1

Instructions: Write the reciprocal of each fraction by switching the top and bottom numbers.

1. $\frac{3}{8}$ reciprocal: $\frac{8}{3}$
2. $\frac{8}{12}$ reciprocal: ___
3. $\frac{1}{5}$ reciprocal: ___
4. $\frac{6}{15}$ reciprocal: ___
5. $\frac{3}{4}$ reciprocal: ___
6. $\frac{20}{35}$ reciprocal: ___
7. $\frac{2}{7}$ reciprocal: ___
8. $\frac{7}{11}$ reciprocal: ___
9. $\frac{8}{19}$ reciprocal: ___
10. $\frac{12}{32}$ reciprocal: ___

Instructions: Multiply each fraction by its reciprocal to get a 'whole fraction' which is just 1.

1. $\frac{2}{5} \times \frac{5}{2} = \frac{10}{10} = 1$
2. $\frac{4}{5} \times \_\_ = \_\_ = 1$
3. $\frac{4}{7} \times \_\_ = \_\_ = 1$
4. $\frac{5}{3} \times \_\_ = \_\_ = 1$
5. $\frac{3}{7} \times \_\_ = \_\_ = 1$
6. $\frac{1}{11} \times \_\_ = \_\_ = 1$
7. $\frac{6}{8} \times \_\_ = \_\_ = 1$
8. $\frac{7}{9} \times \_\_ = \_\_ = 1$
9. $\frac{2}{9} \times \_\_ = \_\_ = 1$
10. $\frac{3}{12} \times \_\_ = \_\_ = 1$

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Name: _____

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Dividing Fractions (Guided Practice)

F-DIV 2

Instructions: Solve these division problems by multiplying by the reciprocal. Use the guides to help you. You do **not** need to simplify your answers.

1 $\frac{3}{4} \div \frac{2}{5}$

$\frac{3}{4} \times \frac{5}{2} = \frac{15}{8}$

2 $\frac{5}{4} \div \frac{2}{3}$

$\frac{5}{4} \times \frac{\quad}{\quad} =$

3 $\frac{1}{7} \div \frac{1}{4}$

$\frac{1}{7} \times \frac{\quad}{\quad} =$

4 $\frac{8}{13} \div \frac{1}{2}$

$\frac{8}{13} \times \frac{\quad}{\quad} =$

5 $\frac{3}{5} \div \frac{1}{6}$

$\frac{3}{5} \times \frac{\quad}{\quad} =$

6 $\frac{4}{8} \div \frac{5}{1}$

$\frac{4}{8} \times \frac{\quad}{\quad} =$

7 $\frac{5}{8} \div \frac{3}{4}$

$\frac{5}{8} \times \frac{\quad}{\quad} =$

8 $\frac{1}{12} \div \frac{1}{12}$

$\frac{1}{12} \times \frac{\quad}{\quad} =$

9 $\frac{7}{9} \div \frac{2}{3}$

$\frac{7}{9} \times \frac{\quad}{\quad} =$

10 $\frac{1}{8} \div \frac{3}{16}$

$\frac{1}{8} \times \frac{\quad}{\quad} =$

11 $\frac{5}{11} \div \frac{4}{7}$

$\frac{5}{11} \times \frac{\quad}{\quad} =$

12 $\frac{9}{10} \div \frac{5}{6}$

$\frac{9}{10} \times \frac{\quad}{\quad} =$

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Dividing Fractions (More Practice)

F-DIV 3

Instructions: Solve these division problems by multiplying by the reciprocal. You do **not** need to simplify your answers.

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

   $\frac{1}{6} \times \frac{7}{3} = \frac{7}{18}$

2. $\frac{5}{6} \div \frac{3}{4}$

3. $\frac{5}{12} \div \frac{1}{4}$

4. $\frac{4}{11} \div \frac{5}{7}$

5. $\frac{4}{7} \div \frac{2}{3}$

6. $\frac{9}{2} \div \frac{5}{1}$

7. $\frac{6}{5} \div \frac{5}{3}$

8. $\frac{2}{7} \div \frac{7}{9}$

9. $\frac{1}{16} \div \frac{1}{6}$

10. $\frac{11}{12} \div \frac{2}{3}$

11. $\frac{3}{10} \div \frac{7}{8}$

12. $\frac{10}{8} \div \frac{8}{9}$

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Dividing a Fraction by a Whole Number (and Vice-Versa)

F-DIV 4

Instructions: Solve these division problems. You do **not** need to simplify your answers in this exercise set.

1 $\frac{3}{5} \div 2 = \frac{3}{5} \div \frac{2}{1}$

$\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$

2 $5 \div \frac{3}{8} =$

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

4 $10 \div \frac{9}{2} =$

5 $\frac{6}{7} \div 5 =$

6 $\frac{1}{4} \div 4 =$

7 $9 \div \frac{4}{7} =$

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

9 $\frac{5}{12} \div 2 =$

10 $4 \div \frac{1}{10} =$

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Name: _____

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Fractions Made From Fractions

F-DIV 5

Instructions: Solve these fraction division problems. Some have guides to help you. You do **not** need to simplify your answers.

1 $\dfrac{\frac{1}{2}}{\frac{5}{7}} = \frac{1}{2} \times \frac{7}{5} = \frac{7}{10}$ (reciprocal)

2 $\dfrac{\frac{2}{5}}{\frac{6}{7}} =$

3 $\dfrac{\frac{4}{7}}{\frac{1}{3}} = \frac{4}{7} \times \_\_ =$

4 $\dfrac{\frac{1}{4}}{\frac{1}{4}} =$

5 $\dfrac{\frac{3}{8}}{\frac{5}{2}} = \frac{3}{8} \times \_\_ =$

6 $\dfrac{\frac{4}{10}}{\frac{3}{7}} =$

7 $\dfrac{\frac{5}{9}}{\frac{6}{9}} = \frac{5}{9} \times \_\_ =$

8 $\dfrac{\frac{2}{9}}{\frac{4}{6}} =$

9 $\dfrac{\frac{1}{5}}{\frac{2}{11}} = \frac{1}{5} \times \_\_ =$

10 $\dfrac{\frac{9}{12}}{\frac{2}{3}} =$

11 $\dfrac{\frac{7}{12}}{\frac{4}{5}} = \frac{7}{12} \times \_\_ =$

12 $\dfrac{\frac{6}{7}}{\frac{8}{9}} =$

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Exercises

Name:

Date:

Dividing Fractions

1 What is the reciprocal of $\frac{4}{7}$?

2 What is the reciprocal of $\frac{9}{2}$?

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

4 $\frac{5}{7} \div \frac{2}{3}$

5 $\frac{3}{5} \div \frac{2}{7}$

6 $\frac{1}{2} \div 2$

7 $\frac{7}{12} \div 4$

8 $6 \div \frac{4}{5}$

9 $\dfrac{\frac{3}{8}}{\frac{2}{5}}$

10 $\dfrac{\frac{1}{6}}{\frac{5}{9}}$

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Name:

Date:

Finding the Reciprocal

F-DIV 1

Instructions: Write the reciprocal of each fraction by switching the top and bottom numbers.

1. $\frac{3}{8}$ reciprocal: $\frac{8}{3}$
2. $\frac{8}{12}$ reciprocal: $\frac{12}{8}$
3. $\frac{1}{5}$ reciprocal: $\frac{5}{1}$
4. $\frac{6}{15}$ reciprocal: $\frac{15}{6}$
5. $\frac{3}{4}$ reciprocal: $\frac{4}{3}$
6. $\frac{20}{35}$ reciprocal: $\frac{35}{20}$
7. $\frac{2}{7}$ reciprocal: $\frac{7}{2}$
8. $\frac{7}{11}$ reciprocal: $\frac{11}{7}$
9. $\frac{8}{19}$ reciprocal: $\frac{19}{8}$
10. $\frac{12}{32}$ reciprocal: $\frac{32}{12}$

Instructions: Multiply each fraction by its reciprocal to get a 'whole fraction' which is just 1.

1. $\frac{2}{5} \times \frac{5}{2} = \frac{10}{10} = 1$
2. $\frac{4}{5} \times \frac{5}{4} = \frac{20}{20} = 1$
3. $\frac{4}{7} \times \frac{7}{4} = \frac{28}{28} = 1$
4. $\frac{5}{3} \times \frac{3}{5} = \frac{15}{15} = 1$
5. $\frac{3}{7} \times \frac{7}{3} = \frac{21}{21} = 1$
6. $\frac{1}{11} \times \frac{11}{1} = \frac{11}{11} = 1$
7. $\frac{6}{8} \times \frac{8}{6} = \frac{48}{48} = 1$
8. $\frac{7}{9} \times \frac{9}{7} = \frac{63}{63} = 1$
9. $\frac{2}{9} \times \frac{9}{2} = \frac{18}{18} = 1$
10. $\frac{3}{12} \times \frac{12}{3} = \frac{36}{36} = 1$

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Name: _____

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Dividing Fractions (Guided Practice)

F-DIV 2

Instructions: Solve these division problems by multiplying by the reciprocal. Use the guides to help you. You do **not** need to simplify your answers.

1 $\frac{3}{4} \div \frac{2}{5}$

$\frac{3}{4} \times \frac{5}{2} = \frac{15}{8}$

2 $\frac{5}{4} \div \frac{2}{3}$

$\frac{5}{4} \times \frac{3}{2} = \frac{15}{8}$

3 $\frac{1}{7} \div \frac{1}{4}$

$\frac{1}{7} \times \frac{4}{1} = \frac{4}{7}$

4 $\frac{8}{13} \div \frac{1}{2}$

$\frac{8}{13} \times \frac{2}{1} = \frac{16}{13}$

5 $\frac{3}{5} \div \frac{1}{6}$

$\frac{3}{5} \times \frac{6}{1} = \frac{18}{5}$

6 $\frac{4}{8} \div \frac{5}{1}$

$\frac{4}{8} \times \frac{1}{5} = \frac{4}{40}$

7 $\frac{5}{8} \div \frac{3}{4}$

$\frac{5}{8} \times \frac{4}{3} = \frac{20}{24}$

8 $\frac{1}{12} \div \frac{1}{12}$

$\frac{1}{12} \times \frac{12}{1} = \frac{12}{12} = 1$

9 $\frac{7}{9} \div \frac{2}{3}$

$\frac{7}{9} \times \frac{3}{2} = \frac{21}{18}$

10 $\frac{1}{8} \div \frac{3}{16}$

$\frac{1}{8} \times \frac{16}{3} = \frac{16}{24}$

11 $\frac{5}{11} \div \frac{4}{7}$

$\frac{5}{11} \times \frac{7}{4} = \frac{35}{44}$

12 $\frac{9}{10} \div \frac{5}{6}$

$\frac{9}{10} \times \frac{6}{5} = \frac{54}{50}$

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Name: _____

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Dividing Fractions (More Practice)

F-DIV 3

Instructions: Solve these division problems by multiplying by the reciprocal. You do **not** need to simplify your answers.

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

$\frac{1}{6} \times \frac{7}{3} = \frac{7}{18}$

2 $\frac{5}{6} \div \frac{3}{4}$

$\frac{5}{6} \times \frac{4}{3} = \frac{20}{18}$

3 $\frac{5}{12} \div \frac{1}{4}$

$\frac{5}{12} \times \frac{4}{1} = \frac{20}{12}$

4 $\frac{4}{11} \div \frac{5}{7}$

$\frac{4}{11} \times \frac{7}{5} = \frac{28}{55}$

5 $\frac{4}{7} \div \frac{2}{3}$

$\frac{4}{7} \times \frac{3}{2} = \frac{12}{14}$

6 $\frac{9}{2} \div \frac{5}{1}$

$\frac{9}{2} \times \frac{1}{5} = \frac{9}{10}$

7 $\frac{6}{5} \div \frac{5}{3}$

$\frac{6}{5} \times \frac{3}{5} = \frac{18}{25}$

8 $\frac{2}{7} \div \frac{7}{9}$

$\frac{2}{7} \times \frac{9}{7} = \frac{18}{49}$

9 $\frac{1}{16} \div \frac{1}{6}$

$\frac{1}{16} \times \frac{6}{1} = \frac{6}{16}$

10 $\frac{11}{12} \div \frac{2}{3}$

$\frac{11}{12} \times \frac{3}{2} = \frac{33}{24}$

11 $\frac{3}{10} \div \frac{7}{8}$

$\frac{3}{10} \times \frac{8}{7} = \frac{24}{70}$

12 $\frac{10}{8} \div \frac{8}{9}$

$\frac{10}{8} \times \frac{9}{8} = \frac{90}{64}$

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Name: _____

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Dividing a Fraction by a Whole Number (and Vice-Versa)

F-DIV 4

Instructions: Solve these division problems. You do **not** need to simplify your answers in this exercise set.

1 $\frac{3}{5} \div 2 = \frac{3}{5} \div \frac{2}{1}$

$\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$

2 $5 \div \frac{3}{8} = \frac{5}{1} \div \frac{3}{8}$

$\frac{5}{1} \times \frac{8}{3} = \frac{40}{3}$

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

$\frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$

4 $10 \div \frac{9}{2} = \frac{10}{1} \div \frac{9}{2}$

$\frac{10}{1} \times \frac{2}{9} = \frac{20}{9}$

5 $\frac{6}{7} \div 5 = \frac{6}{7} \div \frac{5}{1}$

$\frac{6}{7} \times \frac{1}{5} = \frac{6}{35}$

6 $\frac{1}{4} \div 4 = \frac{1}{4} \div \frac{4}{1}$

$\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$

7 $9 \div \frac{4}{7} = \frac{9}{1} \div \frac{4}{7}$

$\frac{9}{1} \times \frac{7}{4} = \frac{63}{4}$

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

$\frac{8}{1} \times \frac{4}{3} = \frac{32}{3}$

9 $\frac{5}{12} \div 2 = \frac{5}{12} \div \frac{2}{1}$

$\frac{5}{12} \times \frac{1}{2} = \frac{5}{24}$

10 $4 \div \frac{1}{10} = \frac{4}{1} \div \frac{1}{10}$

$\frac{4}{1} \times \frac{10}{1} = \frac{40}{1} = 40$

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Name: _____

Date: _____

Fractions Made From Fractions

F-DIV 5

Instructions: Solve these fraction division problems. Some have guides to help you. You do **not** need to simplify your answers.

1 $\dfrac{\frac{1}{2}}{\frac{5}{7}} = \frac{1}{2} \times \frac{7}{5} = \frac{7}{10}$ (reciprocal)

2 $\dfrac{\frac{2}{5}}{\frac{6}{7}} = \frac{2}{5} \times \frac{7}{6} = \frac{14}{30}$

3 $\dfrac{\frac{4}{7}}{\frac{1}{3}} = \frac{4}{7} \times \frac{3}{1} = \frac{12}{7}$

4 $\dfrac{\frac{1}{4}}{\frac{1}{4}} = \frac{1}{4} \times \frac{4}{1} = \frac{4}{4} = 1$

5 $\dfrac{\frac{3}{8}}{\frac{5}{2}} = \frac{3}{8} \times \frac{2}{5} = \frac{6}{40}$

6 $\dfrac{\frac{4}{10}}{\frac{3}{7}} = \frac{4}{10} \times \frac{7}{3} = \frac{28}{30}$

7 $\dfrac{\frac{5}{9}}{\frac{6}{9}} = \frac{5}{9} \times \frac{9}{6} = \frac{45}{54}$

8 $\dfrac{\frac{2}{9}}{\frac{4}{6}} = \frac{2}{9} \times \frac{6}{4} = \frac{12}{36}$

9 $\dfrac{\frac{1}{5}}{\frac{2}{11}} = \frac{1}{5} \times \frac{11}{2} = \frac{11}{10}$

10 $\dfrac{\frac{9}{12}}{\frac{2}{3}} = \frac{9}{12} \times \frac{3}{2} = \frac{27}{24}$

11 $\dfrac{\frac{7}{12}}{\frac{4}{5}} = \frac{7}{12} \times \frac{5}{4} = \frac{35}{48}$

12 $\dfrac{\frac{6}{7}}{\frac{8}{9}} = \frac{6}{7} \times \frac{9}{8} = \frac{54}{56}$

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Exercises

Name:

Date:

Dividing Fractions

1 What is the reciprocal of $\frac{4}{7}$?

$\frac{7}{4}$

2 What is the reciprocal of $\frac{9}{2}$?

$\frac{2}{9}$

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

$\frac{1}{2} \times \frac{4}{1} = \frac{4}{2}$ or 2

4 $\frac{5}{7} \div \frac{2}{3}$

$\frac{5}{7} \times \frac{3}{2} = \frac{15}{14}$ or $1\frac{1}{14}$

5 $\frac{3}{5} \div \frac{2}{7}$

$\frac{3}{5} \times \frac{7}{2} = \frac{21}{10}$ or $2\frac{1}{10}$

6 $\frac{1}{2} \div 2$

$\frac{1}{2} \div \frac{2}{1}$

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

7 $\frac{7}{12} \div 4$

$\frac{7}{12} \div \frac{4}{1}$

$\frac{7}{12} \times \frac{1}{4} = \frac{7}{48}$

8 $6 \div \frac{4}{5}$

$\frac{6}{1} \div \frac{4}{5}$

$\frac{6}{1} \times \frac{5}{4} = \frac{30}{4}$ or $7\frac{1}{2}$

9 $\frac{\frac{3}{8}}{\frac{2}{5}} = \frac{3}{8} \times \frac{5}{2} = \frac{15}{16}$

10 $\frac{\frac{1}{6}}{\frac{5}{9}} = \frac{1}{6} \times \frac{9}{5} = \frac{9}{30}$ or $\frac{3}{10}$

See Video for step-by-step solutions to each problem.

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