

Math Sheet

Name _____ Score _____ / 10 Teacher _____ Date _____

Dividing Mixed Numbers

Convert mixed numbers, multiply by the reciprocal, and simplify.

1. $3 \frac{4}{5} \div 2 \frac{4}{10}$

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

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

4. $4 \frac{2}{3} \div 4 \frac{7}{10}$

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

6. $9 \frac{1}{4} \div 1 \frac{3}{4}$

7. $7 \frac{3}{5} \div 9 \frac{1}{4}$

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

9. $5 \frac{2}{5} \div 4 \frac{8}{10}$

10. $8 \frac{3}{5} \div 1 \frac{1}{3}$

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Dividing Mixed Numbers - Answer key

Convert mixed numbers, multiply by the reciprocal, and simplify.

1.

$$3 \frac{4}{5} \div 2 \frac{4}{10}$$
$$= 1 \frac{7}{12}$$

$3 \frac{4}{5} = (3 \times 5 + 4) / 5 = 19/5$
 $2 \frac{4}{10} = (2 \times 10 + 4) / 10 = 24/10$
Multiply by the reciprocal of $24/10$: $10/24$.
 $19/5 \times 10/24 = 190/120 = 19/12$
Divide both parts by 10: $190/120 = 19/12$.

2.

$$5 \frac{1}{2} \div 1 \frac{4}{5}$$
$$= 3 \frac{1}{18}$$

$5 \frac{1}{2} = (5 \times 2 + 1) / 2 = 11/2$
 $1 \frac{4}{5} = (1 \times 5 + 4) / 5 = 9/5$
Multiply by the reciprocal of $9/5$: $5/9$.
 $11/2 \times 5/9 = 55/18 = 55/18$
Already in lowest terms: $55/18$.

3.

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

$4 \frac{2}{3} = (4 \times 3 + 2) / 3 = 14/3$
 $4 \frac{1}{3} = (4 \times 3 + 1) / 3 = 13/3$
Multiply by the reciprocal of $13/3$: $3/13$.
 $14/3 \times 3/13 = 42/39 = 14/13$
Divide both parts by 3: $42/39 = 14/13$.

4.

$$4 \frac{2}{3} \div 4 \frac{7}{10}$$
$$= \frac{140}{141}$$

$4 \frac{2}{3} = (4 \times 3 + 2) / 3 = 14/3$
 $4 \frac{7}{10} = (4 \times 10 + 7) / 10 = 47/10$
Multiply by the reciprocal of $47/10$: $10/47$.
 $14/3 \times 10/47 = 140/141 = 140/141$
Already in lowest terms: $140/141$.

5.

$$4 \frac{1}{2} \div 2 \frac{1}{3}$$
$$= 1 \frac{13}{14}$$

$4 \frac{1}{2} = (4 \times 2 + 1) / 2 = 9/2$
 $2 \frac{1}{3} = (2 \times 3 + 1) / 3 = 7/3$
Multiply by the reciprocal of $7/3$: $3/7$.
 $9/2 \times 3/7 = 27/14 = 27/14$
Already in lowest terms: $27/14$.

6.

$$9 \frac{1}{4} \div 1 \frac{3}{4}$$
$$= 5 \frac{2}{7}$$

$9 \frac{1}{4} = (9 \times 4 + 1) / 4 = 37/4$
 $1 \frac{3}{4} = (1 \times 4 + 3) / 4 = 7/4$
Multiply by the reciprocal of $7/4$: $4/7$.
 $37/4 \times 4/7 = 148/28 = 37/7$
Divide both parts by 4: $148/28 = 37/7$.

7.

$$7 \frac{3}{5} \div 9 \frac{1}{4}$$
$$= \frac{152}{185}$$

$7 \frac{3}{5} = (7 \times 5 + 3) / 5 = 38/5$
 $9 \frac{1}{4} = (9 \times 4 + 1) / 4 = 37/4$
Multiply by the reciprocal of $37/4$: $4/37$.
 $38/5 \times 4/37 = 152/185 = 152/185$
Already in lowest terms: $152/185$.

8.

$$1 \frac{3}{5} \div 1 \frac{1}{2}$$
$$= 1 \frac{1}{15}$$

$1 \frac{3}{5} = (1 \times 5 + 3) / 5 = 8/5$
 $1 \frac{1}{2} = (1 \times 2 + 1) / 2 = 3/2$
Multiply by the reciprocal of $3/2$: $2/3$.
 $8/5 \times 2/3 = 16/15 = 16/15$
Already in lowest terms: $16/15$.

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9.

$$5 \frac{2}{5} \div 4 \frac{8}{10} = 1 \frac{1}{8}$$

$$5 \frac{2}{5} = (5 \times 5 + 2) / 5 = 27/5$$

$$4 \frac{8}{10} = (4 \times 10 + 8) / 10 = 48/10$$

Multiply by the reciprocal of 48/10: 10/48.

$$27/5 \times 10/48 = 270/240 = 9/8$$

Divide both parts by 30: 270/240 = 9/8.

10.

$$8 \frac{3}{5} \div 1 \frac{1}{3} = 6 \frac{9}{20}$$

$$8 \frac{3}{5} = (8 \times 5 + 3) / 5 = 43/5$$

$$1 \frac{1}{3} = (1 \times 3 + 1) / 3 = 4/3$$

Multiply by the reciprocal of 4/3: 3/4.

$$43/5 \times 3/4 = 129/20 = 129/20$$

Already in lowest terms: 129/20.