

**Order of Operations, First Try**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Class:** \_\_\_\_\_

**Show ALL of your steps vertically to simplify the following expressions.**

1)  $5 + 3 \cdot 2$

2)  $40 - 3(2 + 5)$

3)  $\frac{30 - 6}{2^3}$

4)  $4(15 - 2 \cdot 3)$

5)  $(6)(4 - 1) \div (2 + 1)$

6)  $3(12 - 3^2)$

7)  $\frac{20 - 6}{3 + 2^2}$

8)  $(9 - 3) - (2 + 1)$

9)  $2[4(3 + 2)]$

10)  $(15)(4) \div (2)(6)$

11)  $\frac{2 + 4^2}{3^2}$

12)  $\frac{48 \div 8 \cdot 2}{30 - 3^3}$

Two numbers whose product is 1 are called reciprocals of each other.

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

3 and  $\frac{1}{3}$  are reciprocals.

$$\frac{3}{5} \times \frac{5}{3} = \frac{3 \times 5}{5 \times 3} = \frac{15}{15} = 1$$

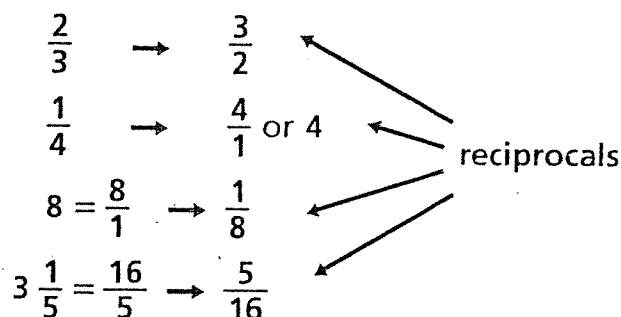
$\frac{3}{5}$  and  $\frac{5}{3}$  are reciprocals.

$$4 \frac{1}{2} \times \frac{2}{9} = \frac{9}{2} \times \frac{2}{9} = \frac{9 \times 2}{2 \times 9} = \frac{18}{18} = 1$$

$4 \frac{1}{2}$  and  $\frac{2}{9}$  are reciprocals.

You can write the reciprocal of any number.

- First, write any whole number or mixed number as a fraction.
- Then reverse the numerator and denominator.



Write the reciprocal of each number.

1.  $\frac{1}{2}$  \_\_\_\_\_

7 \_\_\_\_\_

$4 \frac{1}{3}$  \_\_\_\_\_

$\frac{2}{9}$  \_\_\_\_\_

2.  $\frac{4}{5}$  \_\_\_\_\_

$2 \frac{1}{16}$  \_\_\_\_\_

$\frac{3}{4}$  \_\_\_\_\_

$\frac{1}{7}$  \_\_\_\_\_

3.  $5 \frac{5}{6}$  \_\_\_\_\_

$\frac{1}{5}$  \_\_\_\_\_

$\frac{17}{20}$  \_\_\_\_\_

25 \_\_\_\_\_

4.  $\frac{1}{9}$  \_\_\_\_\_

$\frac{5}{9}$  \_\_\_\_\_

2 \_\_\_\_\_

$4 \frac{2}{3}$  \_\_\_\_\_

5. 9 \_\_\_\_\_

$1 \frac{1}{2}$  \_\_\_\_\_

$\frac{9}{10}$  \_\_\_\_\_

$\frac{1}{4}$  \_\_\_\_\_

6.  $\frac{11}{12}$  \_\_\_\_\_

$\frac{1}{13}$  \_\_\_\_\_

15 \_\_\_\_\_

$6 \frac{4}{5}$  \_\_\_\_\_

## Writing Algebraic Expressions from Words

1. Six more than the product of five and a number
2. Three times the difference of a number and four
3. The sum of a number and twice another number
4. The quotient of four and a number
5. Twelve less than a number squared
6. Four times the sum of a number and seven
7. Half of a number
8. Twice the difference of a number and ten
9. The quotient of a number and five
10. The difference of six and half a number
11. Three times the sum of a number and eight
12. The difference of a fifteen and a number squared