

Simplifying expressions w/ order of operations

P E M D A S

Ex. 1 $6 + 9 \div 3 - 1 \cdot 7$

$6 + 3 - 1 \cdot 7$

$6 + 3 - 7$

$9 - 7$

2

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

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

Ex. 2 $2^2 - 5(3+4)$

$2^2 - 5(7)$

$4 - 5(7)$

$4 - 35$

-31

Ex. 1

* variables go first

* PEMDAS

Ex. 3 $\frac{5+9(6-6)}{(8 \div 2) - 9}$

$\rightarrow 5+9(0)$

$5+0$

$\frac{4-9}{5} = \frac{-5}{5}$

$-\frac{5}{5} = -1$

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

* PEMDAS

* variables go first

* PEMDAS

Ex. 1 $\frac{11}{5} + \frac{11}{3} + \frac{11}{2}$

$\frac{11}{5} + \frac{11}{3} + \frac{11}{2}$

$\frac{11}{5} + \frac{11}{3} + \frac{11}{2}$

$\frac{11}{5} + \frac{11}{3} + \frac{11}{2}$

Ex. 3

* PEMDAS

* variables go first

* PEMDAS

Obstacles of fractions

Operations w/ fractions

• add/subtract

* need common denominators

* add/subtract numerators

Ex. 1 $\frac{2}{2} \cdot \frac{1}{2} + \frac{3}{4} = \frac{5}{4}$

Ex. 2 $\frac{5}{5} \cdot \frac{3}{8} - \frac{1}{5} \cdot \frac{8}{8} = \frac{15}{40} - \frac{8}{40} = \frac{7}{40}$

• Multiplying

* no common denominators needed

* multiply numerators/denominators

Ex. 1 $\frac{4}{7} \cdot \frac{2}{3} = \frac{8}{21}$

Ex. 2 $\frac{6}{5} \left(\frac{1}{7} \right) = \frac{6}{35}$

• division

* multiply by the reciprocal

Ex. 1 $\frac{1}{4} \div \frac{4}{7}$

$\frac{1}{4} \cdot \frac{7}{4} = \frac{7}{16}$

Ex. 3 $\frac{(2+5)-d}{2+d(p-c)} \rightarrow \frac{2+d(p)}{2+d(p)}$

Ex. 1 $e+d \div 3-1 \cdot 1$ Ex. 2 $5 \cdot 2^3 - 2(2+4)$

$e+3-1 \cdot 1$ $5 \cdot 2^3 - 2(2+4)$

$e+3-1$ $5 \cdot 2^3 - 2(2+4)$

$e+3-1$ $5 \cdot 2^3 - 2(2+4)$

$e+3-1$ $5 \cdot 2^3 - 2(2+4)$

[B] [E] [ND] [V 2]

2 multiplying expressions w/ order of operations

Classifications of real numbers

