SmartMathz

Order of Operations (involving the four arithmetic operations and parenthesis)

Grade 6 Expressions & Equations Worksheet

Date:_____   Name:_____

Evaluate each expression using order of operations (**PEMDAS**).

Note: **MD** (Multiplication and Division is from Left to Right); **AS** (Addition and Subtraction is from Left to Right)

Workings:

1. $6 - 2 \times (12 \times 5 - 6) = \boxed{}$

Workings:

2. $5 - 4 + (11 \times 8 - 6) = \boxed{}$

Workings:

3. $(15 - 7 \div 4) + 4 \times 6 = \boxed{}$

Workings:

4. $14 \div (3 \times 7 - 7) - 40 \div 8 = \boxed{}$

Workings:

5. $11 + (2 \times 3 \div 2) - 13 = \boxed{}$

Order of Operations (involving the four arithmetic operations and parenthesis)

Grade 6 Expressions & Equations Answer Sheet

1. $6 - 2 \times (12 \times 5 - 6) = \boxed{\textbf{-102}}$

Workings:

$6-2\times(12\times5-6)$ **First, simplify the parenthesis** $12\times5 = 60$

$= 6-2\times(60-6)$ **Again, simplify the parenthesis** $60-6 = 54$

$= 6 - 2 \times 54$ **Next, multiply** $2 \times 54 = 108$

$= 6 - 108$ **Finally, subtract** $6 - 108 = -102$

$= \textbf{-102}$ ✔

2. $5 - 4 + (11 \times 8 - 6) = \boxed{\textbf{83}}$

Workings:

$5-4+(11\times8-6)$ **First, simplify the parenthesis** $11\times8 = 88$

$= 5-4+(88-6)$ **Again, simplify the parenthesis** $88-6 = 82$

$= 5-4+82$ **Now, subtract** $5-4 = 1$

$= 1+82$ **Finally, add** $1 + 82 = 83$

$= \textbf{83}$ ✔

3. $(15 - 24 \div 4) + 4 \times 6 = \boxed{\textbf{33}}$

Workings:

$(15-24\div4)+4\times6$ **First, simplify the parenthesis** $24\div4 = 6$

$= (15-6)+4\times6$ **Again, simplify the parenthesis** $15-6 = 9$

$= 9+4\times6$ **Next, multiply** $4 \times 6 = 24$

$= 9+24$ **Finally, add** $9 + 24 = 33$

$= \textbf{33}$ ✔

4. $14 \div (3 \times 7 - 7) - 40 \div 8 = \boxed{\textbf{-4}}$

Workings:

$14\div(3\times7-7)-40\div8$ **Simplify the parenthesis** $3 \times 7 = 21$

$= 14\div(21-7)-40\div8$ **Simplify the parenthesis** $21 - 7 = 14$

$= 14\div14-40\div8$ **Next, divide** $14 \div 14 = 1$

$= 1-40\div8$ **Then, divide** $40 \div 8 = 5$

$= 1-5$ **Finally, subtract** $1 - 5 = -4$

$= \textbf{-4}$ ✔

5. $11 + (2 \times 3 \div 2) - 13 = \boxed{\textbf{1}}$

Workings:

$11+(2\times3\div2)-13$ **First, simplify the parenthesis** $2 \times 3 = 6$

$= 11+(6\div2)-13$ **Again, simplify the parenthesis** $6 \div 2 = 3$

$= 11+3-13$ **Now, add** $11 + 3 = 14$

$= 14-13$ **Finally, subtract** $14 - 13 = 1$

$= \textbf{1}$ ✔