

Curriculum Outcome

N1: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.

Student Friendly:

**Review of
BEDMAS**



Grade 9 Warm Up



1) Determine the missing number in each division statement.

a) $\underline{\hspace{2cm}} \div 7.25 = 2.1$

b) $\underline{\hspace{2cm}} \times -0.7 = 0.896$

c) $\frac{91}{4} \div \boxed{} = \frac{13}{7}$

2) A pizza cost \$25.98. If 7 people are sharing the cost, what was the cost for each person?



Grade 9 Warm Up



1) Determine the missing number in each division statement.

a) $\underline{\hspace{2cm}} \div 7.25 = 2.1$

b) $\underline{\hspace{2cm}} \times -0.7 = 0.896$

$$\square = 7.25 \times 2.1$$

$$= 15.225$$

$$\square = 0.896 \div (-0.7)$$

$$= -1.28$$

$$c) \frac{91}{4} \div \square = \frac{13}{7}$$

$$\square = \frac{91}{4} \div \frac{13}{7}$$

$$\square = \frac{91}{4} \times \frac{7}{13}$$

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

$$\square = \frac{49}{4}$$

Word Problems

1) A pizza cost \$25.98. If 7 people are sharing the cost, what was the cost for each person?

$$\text{\$}25.98 \div 7 = \text{\$}3.72$$

B E D M A S

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*How to work with
exponents*

$$(2)^4 = 2 \times 2 \times 2 \times 2$$
$$= 16$$

$$(-3)^5 = (-3)(-3)(-3)(-3)(-3)$$
$$= -243$$

Calculator Use

Use x^y or y^x or $^$ or x^\square for exponents on calculators

$$(3)^2$$

$$= 9$$

$$(-4)^2$$

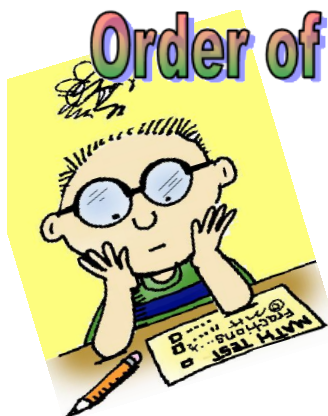
$$= 16$$

$$(-4)^3$$

$$= -64$$

Section 3.5_z

Order of Operations with Rational Numbers



Remember from operations

"BEDMAS".....order of

In the order that they appear

Recall

Evaluate the following

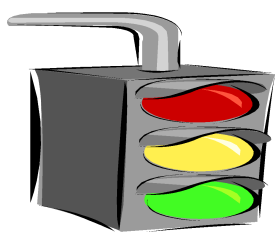
$$\begin{aligned} 1) & \quad (-5) - 3[18 \div (-3)]^2 \\ & \quad = (-5) - 3[-6]^2 \\ & \quad = (-5) - 3[36] \\ & \quad = (-5) - [108] \\ & \quad = -113 \end{aligned}$$

Do we need more practice?



$$\begin{aligned} 1) & 3 - [(-5) + 1]^3 \\ & = 3 - [-4]^3 \\ & = 3 - [-64] \\ & = 67 \end{aligned}$$

$$\begin{aligned} 2) & [(-3 + 5)^2 + 6(-2) + 7(3)]^2 \\ & = [(2)^2 + 6(-2) + 7(3)]^2 \\ & = [(4) + 6(-2) + 7(3)]^2 \\ & = [(4) + (-12) + 21]^2 \\ & = [-8 + 21]^2 \\ & = [13]^2 \\ & = 169 \end{aligned}$$



Class/Homework

BEDMAS

Worksheet 1

Worksheet 2

Worksheet 3

- must show work since
final answers are given

Sheet 1

Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $(31 - 3) \div 7 + 4^2$

6) $(41 - 3^2) \div (18 - 2)$

2) $7 \times (13 - 3) - 2^2$

7) $5 \times (10 - 6) + 7^2$

3) $(51 - 3) \div 2 - 5^2$

8) $(12 \times 5 + 5^2) + 4$

4) $(6 + 3)^2 + (12 \div 3)$

9) $(39 - 3^2) \div (-1 + 4)$

5) $(7 + 2)^2 + (20 \div 10)$

10) $(12 \times 7 - 5^2) + 3$

Sheet 1: Answers

Order of Operations

1) $(31 - 3) \div 7 + 4^2$

20

6) $(41 - 3^2) \div (18 - 2)$

2

2) $7 \times (13 - 3) - 2^2$

66

7) $5 \times (10 - 6) + 7^2$

69

3) $(51 - 3) \div 2 - 5^2$

-1

8) $(12 \times 5 + 5^2) + 4$

89

4) $(6 + 3)^2 + (12 \div 3)$

85

9) $(39 - 3^2) \div (-1 + 4)$

10

5) $(7 + 2)^2 + (20 \div 10)$

83

10) $(12 \times 7 - 5^2) + 3$

62

Sheet 2

Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $(15 + 61 - 6^2) \div (13 - 3)$

6) $(12 + 24 - 2^2) \div (8 - 4)$

2) $(7 + 2)^2 + (13 - 12 \div 6)$

7) $6 \times (13 \times 6 - 3^2) - 9$

3) $(10 + 3) \times (12 + 4) - 6^2$

8) $(10 - 4)^2 + (14 + 8 \div 4)$

4) $8 \times (12 \times 5 - 9^2) + 10$

9) $(13 + 30 - 3) \div 10 - 4^2$

5) $(11 + 27 - 2) \div 3 + 6^2$

10) $(10 - 6) \times (13 + 5) - 7^2$

Sheet 2: Answers

Order of Operations

$$1) (15 + 61 - 6^2) \div (13 - 3)$$

4

$$6) (12 + 24 - 2^2) \div (8 - 4)$$

8

$$2) (7 + 2)^2 + (13 - 12 \div 6)$$

92

$$7) 6 \times (13 \times 6 - 3^2) - 9$$

405

$$3) (10 + 3) \times (12 + 4) - 6^2$$

172

$$8) (10 - 4)^2 + (14 + 8 \div 4)$$

52

$$4) 8 \times (12 \times 5 - 9^2) + 10$$

-158

$$9) (13 + 30 - 3) \div 10 - 4^2$$

-12

$$5) (11 + 27 - 2) \div 3 + 6^2$$

48

$$10) (10 - 6) \times (13 + 5) - 7^2$$

23



Sheet 3

Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $3 + (9 + (6 + 5)^2)$

6) $10 + ((16 + 3) + 6^2)$

2) $(5^2 + (12 \div 6 + 3^2))$

7) $((15 + 5) + (20 \div 10)^2)$

3) $((15 - 6) - (16 \div 2)^2)$

8) $((4 + 2)^2 \times 3) - 2^2$

4) $(6^2 + (14 \div 2 + 3^2))$

9) $15 + ((18 - 7) + 5^2)$

5) $((3 + 3)^2 + 6) + 8^2$

10) $19 + (4 + (5 + 4)^2)$



Sheet 3: Answers

Order of Operations

$$1) \quad 3 + (9 + (6 + 5)^2)$$

133

$$6) \quad 10 + ((16 + 3) + 6^2)$$

65

$$2) \quad (5^2 + (12 \div 6 + 3^2))$$

36

$$7) \quad ((15 + 5) + (20 \div 10)^2)$$

24

$$3) \quad ((15 - 6) - (16 \div 2)^2)$$

-55

$$8) \quad ((4 + 2)^2 \times 3) - 2^2$$

104

$$4) \quad (6^2 + (14 \div 2 + 3^2))$$

52

$$9) \quad 15 + ((18 - 7) + 5^2)$$

51

$$5) \quad ((3 + 3)^2 + 6) + 8^2$$

106

$$10) \quad 19 + (4 + (5 + 4)^2)$$

104



Sheet 4

Name : _____ Score : _____

Teacher : _____ Date : _____

Order of Operations

1) $((9 - 2)^2 + 3) + 10 + 8^2$

6) $((14 - 7) + (15 \div 5)^2) \times 3^2$

2) $(4^2 + (14 \div 2 + 3^2)) + 5^2$

7) $(15 \div 5)^2 + ((13 + 5) + 3^2)$

3) $((9 - 3)^2 \times 2) + 9 - 3^2$

8) $9 + (10 + (4 + 6)^2) - 6$

4) $((17 + 6) - (18 \div 6)^2) + 2^2$

9) $(14 \div 7)^2 + ((12 + 7) + 5^2)$

5) $17 + (2 \times (5 + 5)^2) - 2$

10) $(7^2 + (10 \div 2 + 4^2)) + 5^2$



Sheet 4: Answers

Order of Operations

$$1) ((9 - 2)^2 + 3) + 10 + 8^2$$

126

$$2) (4^2 + (14 \div 2 + 3^2)) + 5^2$$

57

$$3) ((9 - 3)^2 \times 2) + 9 - 3^2$$

72

$$4) ((17 + 6) - (18 \div 6)^2) + 2^2$$

18

$$5) 17 + (2 \times (5 + 5)^2) - 2$$

215

$$6) ((14 - 7) + (15 \div 5)^2) \times 3^2$$

144

$$7) (15 \div 5)^2 + ((13 + 5) + 3^2)$$

36

$$8) 9 + (10 + (4 + 6)^2) - 6$$

113

$$9) (14 \div 7)^2 + ((12 + 7) + 5^2)$$

48

$$10) (7^2 + (10 \div 2 + 4^2)) + 5^2$$

