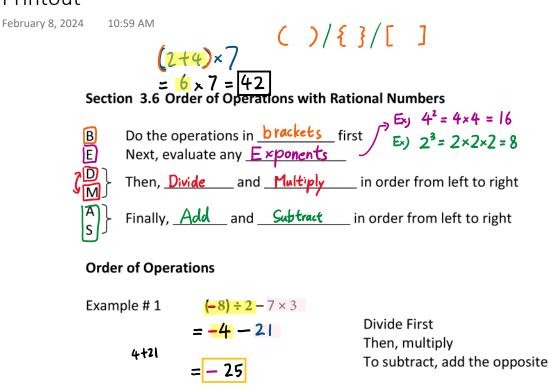
## Printout



Example # 2

$$(-4+5) + 4^2 \times 2$$
  
= 1 + 16 × 2  
= 1 + 32  
= 33

4×4

Brackets First Then evaluate the power Then multiply

## **Order of Operations with Fractions**

Example # 1 
$$\left(\frac{3}{4}, \frac{7}{8}, \frac{7}{8}\right) \div \left(-\frac{5}{16}\right)$$
  
=  $\left(\frac{6}{8} - \frac{7}{8}\right) \div \left(-\frac{5}{16}\right)$   
=  $\frac{-1}{8} \times \frac{-16}{5}^{2}$   
=  $\frac{2}{5}$ 

<u>Subtract</u> in the <u>brackets</u> first Use a common denominator of <u>8</u>

To divide, multiply by the reciprocal

$$\frac{a}{b} \rightarrow \times \frac{b}{a}$$

Look for common factors

Both factors are negative, so the product is <u>positive</u>.

Example #2  $\left(-\frac{2}{3}\right) \times \frac{1}{6} + \frac{1}{2}$ 

$$= \frac{-1^{\times 2}}{9^{\times 2}} + \frac{1^{\times 9}}{2^{\times 9}}$$

 $=\frac{7}{18}$ 

 $= -\frac{2}{18} + \frac{9}{18} -2+9$ 9-2=7 Multiply First

Look for common factors

Add.

Use a common denominator of 18.

Example # 3 
$$(2\frac{1}{3}) + (1\frac{1}{4}) \times (-\frac{2}{3})$$
 Convert mixed numbers to Improper  
 $= \frac{7}{3} + \frac{5}{4_2} \times (-\frac{2}{3})^1$  Convert mixed numbers to Improper  
fractions  
Mult ply first  
 $= \frac{7^{x4}}{3_{x4}} - \frac{5^{x2}}{6_{x2}}$   $+/-$  Use a common  
denominator of 12  
 $= \frac{28}{12} - \frac{10}{12} = \frac{18}{12} = \frac{3}{2}$   $= 1\frac{1}{2}$   
 $\propto$  Always Reduce

.

**Error Questions** 

 A student's solution to a problem, to the nearest hundredth, is shown below. The solution is incorrect. Identify the errors. Provide a correct solution.
 (2 (-8)×(-8)=+64)

$$(-8)^{2} \div (-2) - 3 \times (-6)$$

$$(-8)^{2} \div (-2) - 3 \times (-6)$$

$$= 64 \div (-2) + 18$$

$$(7 \times 2) + 5 = 14 + 5 = 19$$

$$(7 \times 2) + 5 = 14 + 5 = 14 + 5$$

$$= -14$$

$$(7 \times 2) + 5 = 14 + 5 = 14 + 5$$

$$= -18$$

$$= -14$$

2. Two students were asked to evaluate: (-8) -  $2(24 \div (-8))^2$ 

Here are their calculations.

Student 1	Student 2
$(-8) - 2(24 \div (-8))^2$	$(-8) - 2(24 \div (-8))^2$
$= (-10) (24 \div (-8))^2$	$= (-8) - 2 (-3)^2$
$= (-10)(-3)^2$	$= (-8) - (-6)^2$
= (-10) (9)	= -8-36
= -90	= -44

Why did both these students get incorrect answers? What is the correct answer?

Answer:

Student 1	Student 2
$(-8) - 2(24 \div (-8))^2$	$(-8) - 2(24 \div (-8))^2$
= (-10) (24 ÷ (-8)) <sup>2</sup>	$= (-8) - (2)^{2}$
$= (-10)(-3)^2$	$= (-8) - (-6)^2$
= (-10) (9)	= -8-36
= -90	= - 44

$$-8 - 2x[24 \div (-8)]^{2}$$
Correct Answer:  

$$= -8 - 2x[-3]^{2} \quad (-3)x(-3)$$

$$= -8 - 2 \times 9,$$

$$= -8 - 18,$$

$$= -26, \quad (1) \quad (2u12 \quad 3.4 \quad Tomorrow \quad (x/\div BEDMAS))$$

$$(2) \quad P.116 \quad (27)$$

$$(3) \quad (h.3) \quad Test \quad on \quad Wednesday \quad next \quad week$$