

Section 3.6

September 24

Orders of Operations

BEDMAS

r
a
c
k
e
t
s

x
m
u
l
t
i
p
l
i
c
a
t
i
o
n

u
n
d
e
r
l
i
n
e

order it appears
in question

d
i
v
i
d
e
n
s
i
t
y

u
b
t
r
a
c
t

order they appear
in the question

$$-\frac{1}{6} - \frac{1}{2} + \frac{3}{8}$$

$$\overset{x^4}{x^4} \frac{-1}{6} - \overset{x^{12}}{x^{12}} \frac{1}{2} + \overset{x^3}{x^3} \frac{11}{8}$$

BEAMAS

$$\frac{-28}{24} + \frac{-12}{24} + \frac{33}{24}$$

$$\frac{-7}{24}$$

Orders of Operation

BEDMAS

1. $3 \times 2 + 9$

$$6 + 9$$

$$15$$

2. $7 \times 6 + 4 \times 2$

$$42 + 4 \times 2$$

$$42 + 8$$

$$50$$

BEDMAS

3. $8 \div 2 \times 9$

$$4 \times 9 \\ 36$$

4. $24 - 7 \times 2$

$$24 - 14 \\ 10$$

BEDMAS (-) $42 \div (6 - 3)$

5. $36 \div 9 + 7$

$$\begin{array}{r} 4 + 7 \\ 11 \end{array}$$

6. $42 \div (6 - 3)$

$$\begin{array}{r} 42 \div 3 \\ 14 \end{array}$$

BEDMAS

7. $(4 + 3 \times 2) - 10$

$$\begin{aligned} &(4 + 6) - 10 \\ &(10) - 10 \\ &0 \end{aligned}$$

8. $(10 - 2 \times 2) \times 3$

$$\begin{aligned} &(10 - 4) \times 3 \\ &6 \times 3 \\ &18 \end{aligned}$$

$$9. \frac{4 \times 2 + 3 \times 6}{2 \times 7 - 1}$$

$$\frac{8 + 3 \times 6}{14 - 1}$$

$$\frac{8 + 18}{13}$$
$$\frac{26}{13} = 2$$

$$10. \frac{27 \div 3 + 1}{2 \times 2 + 1}$$

$$\frac{9 + 1}{4 + 1}$$

$$\frac{10}{5} = 2$$

BEDMAS

$$11. \quad (-3) - 2 \times 8 + 8$$

$$-3 - 2 \times 8 + 8$$

$$-3 - 16 + 8$$

$$-19 + 8$$

$$\textcircled{-11}$$

Orders of Operations with decimals...**BEDMAS**

12. $(-0.8) + 1.2 \div (-0.3) \times 1.5$

$$-0.8 + -4 \times 1.5$$

$$-0.8 - 6$$

$$-6.8$$

B. $(-3.2) - 0.9 \div [0.7 - (-1.2)]$

BEDMAS

$$-3\frac{2}{5} \times -1\frac{5}{6} + \frac{3}{10}$$

$$-\frac{17}{5} \times -\frac{11}{6} + \frac{3}{10}$$

$$\frac{187}{30} + \frac{3 \times 3}{10 \times 3}$$

$$\frac{187}{30} + \frac{9}{30} = \frac{196}{30} = 6\frac{16}{30}$$

$$\left(6\frac{8}{15}\right)$$

BEDMAS

$$-3\frac{1}{2} \times 2\frac{1}{6} \div -\frac{1}{5}$$

$$-\frac{7}{2} \times \frac{13}{6} \div -\frac{6}{5}$$

$$-\frac{91}{12} \div -\frac{6}{5}$$

$$-\frac{91}{12} \times -\frac{5}{6}$$

$$\frac{455}{72}$$

$$6\frac{3}{12}$$

BEDMAS

$$\left(\frac{3^{x^3}}{7^{x^3}} + \frac{11}{21} \right) \div \frac{5}{12} \times \frac{-2}{3}$$

$$\left(\frac{9}{21} + \frac{11}{21} \right) \div \frac{5}{12} \times \frac{-2}{3}$$

$$\frac{20}{21} \div \frac{5}{12} \times \frac{-2}{3}$$

$$\frac{20}{21} \times \frac{12}{5} \times \frac{-2}{3}$$

$$\frac{240}{105} \times \frac{-2}{3}$$

$$\frac{-480}{315}$$

$$= \left(-\frac{11}{21} \right)$$

$$\frac{-480}{315}$$

$$\frac{-165}{315}$$

$$-1 \frac{11}{21}$$

$$\left(\frac{1}{2}\right) \times \left(\frac{1}{2}\right) \quad \left(\frac{1}{2}\right) \left(\frac{1}{2}\right)$$
$$\frac{1}{2} \times \frac{1}{2}$$

Classwork

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4 a, b, c

$$\begin{array}{l} \rightarrow \frac{1}{4} \rightarrow \frac{-5}{4} \rightarrow \left(\frac{-1}{4} \right) \\ \left(\frac{5}{8} \right) \rightarrow \left(\frac{7}{8} \right) \end{array}$$

Worksheet... **DO NOT MARK ON SHEET!**

QUESTIONS 1-10!!!

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*1-5 worksheet

$$-\frac{5}{4} = \left(-\frac{1}{4} + \frac{3x^2}{2x^2}\right) \left(-\frac{1}{4} + \frac{3x^2}{2x^2}\right)$$

$$-\frac{5}{4} = \left(-\frac{1}{4} + \frac{6}{4}\right) \left(-\frac{1}{4} + \frac{6}{4}\right)$$

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

