

E: Applying Integer Operations

BEDMAS
B rackets
E xponents
D ivide
M ultiply
A dd
S ubtract

* You can change the order of divide ÷ multiply
-or- add ÷ subtract *

SIGN RULES

$$+ \times + = +$$

$$- \times - = +$$

$$+ \times - = -$$

$$+ \div + = +$$

$$- \div - = +$$

$$+ \div - = -$$

Examples:

1. Calculate.

a) $(-3) \times [(+11) - (+9)] + (-8)$ Brackets $(+11) - (+9)$ 1st!

$$= (-3) \times (+2) + (-8)$$

$$= (-6) + (-8)$$

Multiply $(-3) \times (+2)$ 2nd! $- \times + = -$

Add last!

$$\boxed{= -14}$$

b) $(-4) + (-36) \div (+4) \div (-3)$ Division $(-36) \div (+4)$. * $- \div + = -$

$$= (-4) + (-9) \div (-3)$$

Division $(-9) \div (-3)$ * $- \div - = +$

$$= (-4) + (+3)$$

Add

$$\boxed{= -1}$$

c) $-20 \div 10 + 4 \times (-5)$ Division $-20 \div 10$ * $- \div + = -$

$$= -2 + 4 \times (-5)$$

$$= -2 + (-20)$$

Multiply $4 \times (-5)$ * $+ \times - = -$

Add

$$\boxed{= -22}$$

$$\begin{aligned}
 1) & 26 + (-11) - 4 \times [3 - (-3)] \quad \text{Brackets. } [3 - (-3)] \\
 & = 26 + (-11) - 4 \times (+6) \quad \text{Multiply } -4 \times (+6) \quad * - \times + = - \\
 & = 26 + (-11) - 24 \quad \text{Add } 26 + (-11) \\
 & = 15 - 24 \quad \text{Subtract } 15 - 24 \\
 & = \boxed{-9}
 \end{aligned}$$

2. The daily lows for five days were -5°C , $+2^{\circ}\text{C}$, -3°C , $+2^{\circ}\text{C}$, and -7°C . What is the mean of these temperatures?

* mean is the average.

To get an average add all numbers \div divide by total numbers!

$$\text{Mean} = \frac{[(-5) + (+2) + (-3) + (+2) + (-7)]}{5} \leftarrow \text{is the same as dividing!}$$

$5 \leftarrow$ because there are 5 temperatures.

$$\begin{aligned}
 \text{mean} &= \frac{[(-3) + (-3) + (+2) + (-7)]}{5} \\
 &= \frac{[(-6) + (+2) + (-7)]}{5} \\
 &= \frac{[(-4) + (-7)]}{5} \\
 &= \frac{(-11)}{5}
 \end{aligned}$$

I did the additions one at a time. If you are comfortable you can add them all in one step!

$$= \boxed{-2.2^{\circ}\text{C}}$$



Do not round unless you are asked to and don't forget your $^{\circ}\text{C}$ units.

3. Over a twenty-year period the population of Edmonton rose from 585 000 to 1 000 010. What was the mean population change per year?

First find the total change in population:

$$\begin{array}{r} 1\,000\,010 \\ - 585\,000 \\ \hline 415\,010 \end{array}$$

Find the change per year by dividing by 20 yrs, (given in question)

$$= \frac{415\,010}{20}$$

= 20 750.5 * can't have .5 of a person so round down.

= 20 750 (positive because population increases)

Answer with a sentence!

The mean population change is an increase of 20 750 people per year.

Assignment: Pg. 315 # 4-10

more ... μ_1 ... μ_2 ... μ_3 ... μ_4 ... μ_5 ... μ_6 ... μ_7 ... μ_8 ... μ_9 ... μ_{10} ... μ_{11} ... μ_{12} ... μ_{13} ... μ_{14} ... μ_{15} ... μ_{16} ... μ_{17} ... μ_{18} ... μ_{19} ... μ_{20} ... μ_{21} ... μ_{22} ... μ_{23} ... μ_{24} ... μ_{25} ... μ_{26} ... μ_{27} ... μ_{28} ... μ_{29} ... μ_{30} ... μ_{31} ... μ_{32} ... μ_{33} ... μ_{34} ... μ_{35} ... μ_{36} ... μ_{37} ... μ_{38} ... μ_{39} ... μ_{40} ... μ_{41} ... μ_{42} ... μ_{43} ... μ_{44} ... μ_{45} ... μ_{46} ... μ_{47} ... μ_{48} ... μ_{49} ... μ_{50} ... μ_{51} ... μ_{52} ... μ_{53} ... μ_{54} ... μ_{55} ... μ_{56} ... μ_{57} ... μ_{58} ... μ_{59} ... μ_{60} ... μ_{61} ... μ_{62} ... μ_{63} ... μ_{64} ... μ_{65} ... μ_{66} ... μ_{67} ... μ_{68} ... μ_{69} ... μ_{70} ... μ_{71} ... μ_{72} ... μ_{73} ... μ_{74} ... μ_{75} ... μ_{76} ... μ_{77} ... μ_{78} ... μ_{79} ... μ_{80} ... μ_{81} ... μ_{82} ... μ_{83} ... μ_{84} ... μ_{85} ... μ_{86} ... μ_{87} ... μ_{88} ... μ_{89} ... μ_{90} ... μ_{91} ... μ_{92} ... μ_{93} ... μ_{94} ... μ_{95} ... μ_{96} ... μ_{97} ... μ_{98} ... μ_{99} ... μ_{100} ...

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