

1.1 Integers

→ whole #
→ positive and negative

Adding & Subtracting Integers

* Double Signs
→ simplify first

$$\begin{array}{c} + \quad - \quad - \\ \text{Ex. 1 a) } 4 + (-5) = 4 - 5 \\ = -1 \end{array}$$

$$\begin{array}{c} - \quad - \quad + \\ \text{b) } 4 - (-5) = 4 + 5 \\ = 9 \end{array}$$

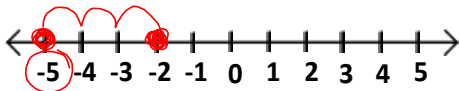
Conclusions...

- Adding a negative is the same as subtracting
- Subtracting a negative is the same as adding

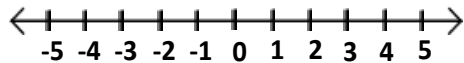
If there are **TWO SIGNS** beside each other...
then **SIMPLIFY**

Ex. 2

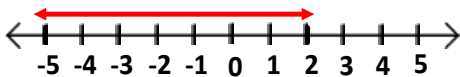
$$\begin{array}{l} \text{a) } (-2) + (-3) \\ = -2 - 3 \\ = -5 \end{array}$$



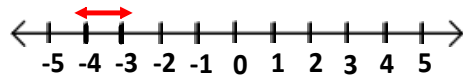
$$\begin{array}{l} \text{b) } 5 + (-7) \\ = 5 - 7 \\ = -2 \end{array}$$



$$\begin{array}{l} \text{c) } 2 - (-5) \\ \text{This is the difference between 2 and -5} \\ \rightarrow = 2 + 5 \\ = 7 \end{array}$$



$$\begin{array}{l} \text{d) } (-3) - (-4) \\ \dots \text{ difference between -3 and -4} \\ = -3 + 4 \\ = 1 \end{array}$$



$$\begin{array}{l} \text{e) } 4 - 7 - (-1) \\ = 4 - 7 + 1 \\ = -2 \end{array}$$

$$\begin{array}{l} 0 - (-3) - 1 \\ \text{f) } (-3) - 1 \\ = +3 - 1 \\ = 2 \end{array}$$

+ +

Multiplying & Dividing

(-)(-) Integers (+)(-)

(-)(+)

+

+

-

-

When multiplying or dividing integers

- same signs give a POSITIVE answer
- different signs give a NEGATIVE answer

(+)(-)
Ex. 3 Evaluate

a) $(2)(-6)$
 $= -12$

$(-)(-)$
b) $-(-4)$
 $= +4$

c) $(-24) \div (-8)$
 $= +3$

+ -
 ~~$(-)(-)(-)$~~ ODD

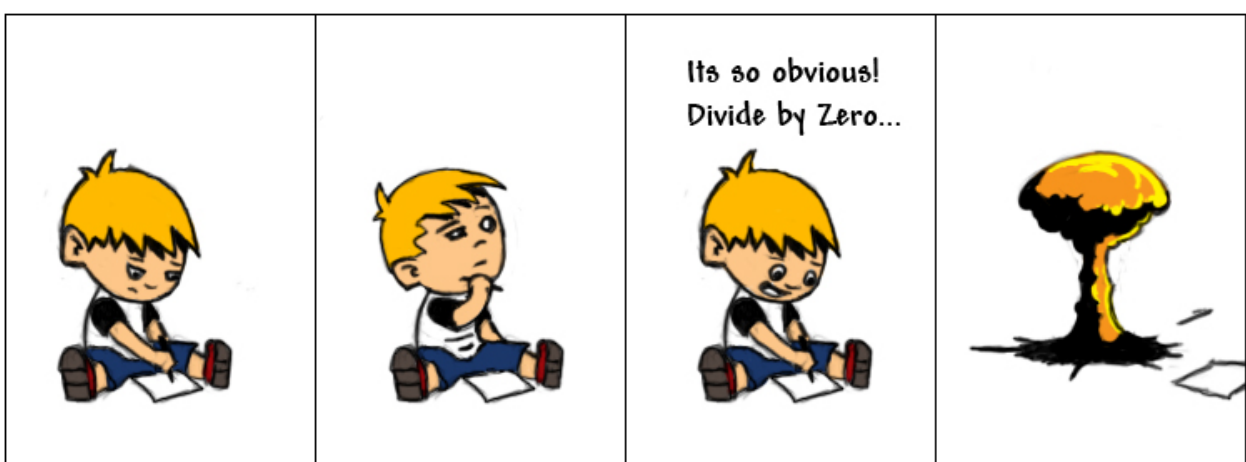
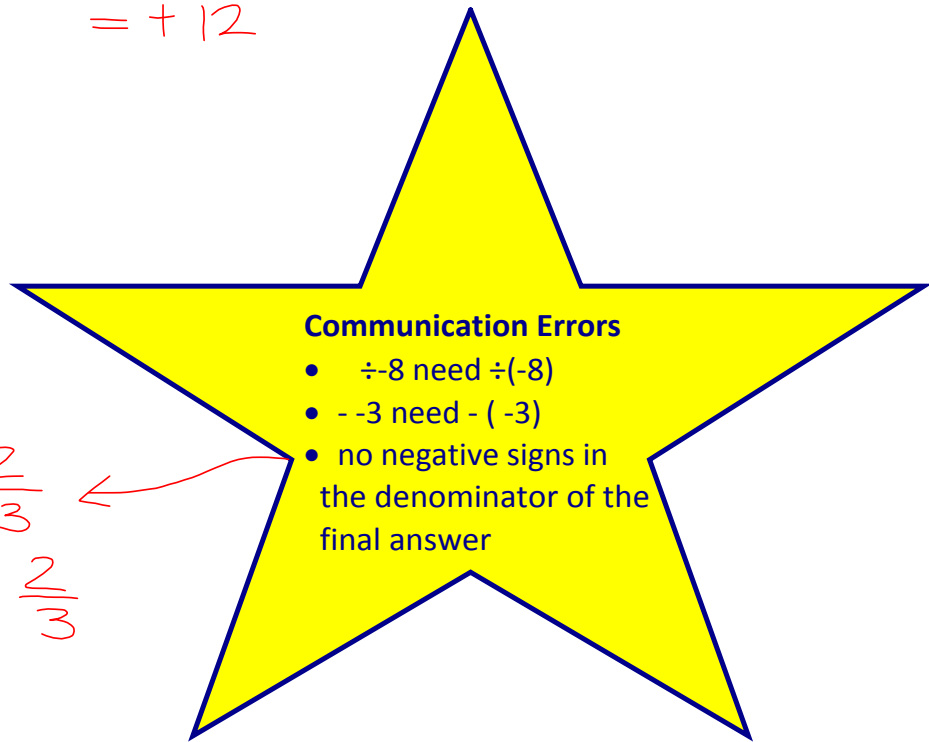
d) $(-2)(-3)(-4)$
 $= (6)(-4)$
 $= -24$

e) $\frac{-36}{-3}$
 $= +12$

f) $0 \div 8$
 $= 0$

g) $12 \div 0$
undefined

$= -\frac{2}{3}$
 $= \frac{2}{-3}$
 $= -\frac{2}{3}$



Curtis Lawrence

Ex. 4 The temperature in Ottawa starts at -3°C and rises 15°C during the day. It then falls 17°C , what is the final temperature?

$$\begin{aligned} & -3 + 15 - 17 \\ & = -5 \end{aligned}$$



**ALWAYS, ALWAYS, ALWAYS
SHOW YOUR WORK!**

Let's take it up a notch... BEDMAS

Ex. 5

$$\begin{aligned} & -6 - (7 + (-2)(4))^2 \\ & = -6 - (7 + (-8))^2 \\ & = -6 - (7 - 8)^2 \\ & = -6 - (-1)^2 \quad \leftarrow E \\ & = -6 - 1 \quad \leftarrow (-1)(-1) \\ & = -7 \end{aligned}$$

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