

Multiplying Positive and Negative Numbers

Find the first 6 products and look for a pattern in the answers.

$$5 \cdot 4 =$$

$$4 \cdot 4 =$$

$$3 \cdot 4 =$$

$$2 \cdot 4 =$$

$$1 \cdot 4 =$$

$$0 \cdot 4 =$$

$$-1 \cdot 4 =$$

$$-2 \cdot 4 =$$

$$-3 \cdot 4 =$$

$$-4 \cdot 4 =$$

$$-5 \cdot 4 =$$

What is happening from answer to answer as we decrease the first number? _____

What kind of number do we get when we have:

a) a positive times a positive? _____

b) a positive times a negative? _____

We can also view the negative sign as separate from the multiplication itself, like “ $- \cdot 5 \cdot 4$ ”, which is the “opposite of $5 \cdot 4$ ”, or $- 20$.

Multiplying Two Negative Numbers

Refer to what we discovered on the previous page:

$$5 \cdot -4 =$$

$$4 \cdot -4 =$$

$$3 \cdot -4 =$$

$$2 \cdot -4 =$$

$$1 \cdot -4 =$$

$$0 \cdot -4 =$$

$$-1 \cdot -4 =$$

$$-2 \cdot -4 =$$

$$-3 \cdot -4 =$$

$$-4 \cdot -4 =$$

$$-5 \cdot -4 =$$

What is happening from answer to answer as we decrease the first number? _____

What kind of number do we get when we have:

a) a positive times a negative? _____ (as previously discovered)

b) a negative times a negative? _____

Again, we can also look at two negative signs as separate from the multiplication itself so that we have something like $-5 \cdot -4 = "- \cdot - \cdot 5 \cdot 4"$, or "the opposite of a negative 20" = +20