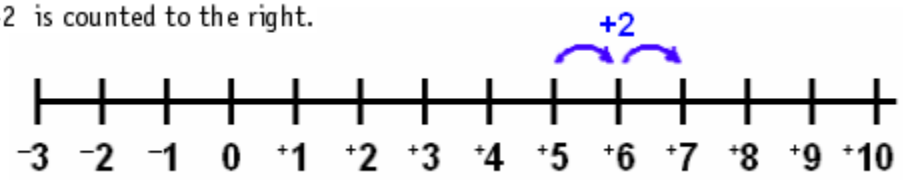
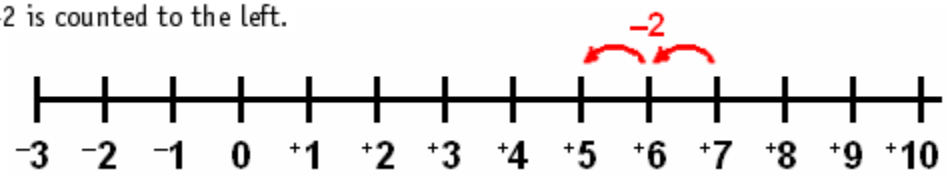
COUNTING WITH INTEGERS

FACT 1: A positive integer is counted to the right. A negative integer is counted to the left from a number.

(a) +2 is counted to the right.



(b) –2 is counted to the left.



FACT 2: Integers of like sign are counted in the same direction to provide a net sum of count.

+5 +2	=	0 + 5 + 2	=	+7
–5 –2	=	0 – 5 – 2	=	–7

FACT 3: Integers of unlike signs are counted in opposite directions to provide a net difference of count.

+3 –8	=	0 + 3 – 8	=	–5
–3 +8	=	0 – 3 + 8	=	+5

FACT 4: Sign of integer remains the same in addition.

(+5) + (+2) =	+5 +2	=	+7
(+5) + (–2) =	+5 –2	=	+3

FACT 5: Sign of integer reverses in subtraction.

(+5) – (+2) =	+5 –2	=	+3
(+5) – (–2) =	+5 +2	=	+7

FACT 5: From the above we get the following rule for "consecutive signs."

(a) Two consecutive LIKE signs make a POSITIVE sign.

+ (+2)	**→**	**+2**	means	**(+)(+)**	**→**	**(+)**
– (–2)	**→**	**+2**	means	**(–) (–)**	**→**	**(+)**

(b) Two consecutive UNLIKE signs make a NEGATIVE sign.

+ (–2)	**→**	**–2**	means	**(+)(–)**	**→**	**(–)**
– (+2)	**→**	**–2**	means	**(–)(+)**	**→**	**(–)**

FACT 6: When adding or subtracting integers reduce the consecutive signs to a single counting sign first.

(+12) – (–7) – (+8) + (–3) + (+2) = +12 +7 –8 –3 +2 = 10
(–12) – (–7) + (8) – (+3) – (–2) = –12 +7 +8 –3 +2 = 2

1. Count the following set of integers consecutively on number line.

(a) +2, –8, +7
(b) +5, –3, –2
(c) –9, +3, +5, –7
(d) +3, +8, +4, –11
(e) +6, –5, –7, –12, +3
(f) –5, +3, +9, –8, +2

Check Answer: (a) +1 (b) 0 (c) -8 (d) +4 (e) -15 (f) +1

2. Compute the following after reducing the consecutive signs to a single counting sign first.

(a) (–6) + (+6) + (–7) – (+12) – (–3)
(b) 16 – (–7) – (+16) + (–3) – 5
(c) (–9) – 5 – (–9) + (+5) + (–2)
(d) (+9) – (–12) + (+8) + (–12) – (+7)
(e) (–3) – (+6) – (–7) – 9 – (–3)
(f) 6 + (–7) +16 + (–3) – (+5)
(g) (–4) + 5 – (–9) + (+5) – (–2)
(h) (+7) – (+5) + (+9) + (–6) + (–13) – (–8)

Check Answer: (a) –16 (b) –1 (c) –2 (d) +10 (e) –8 (f) +7 (g) +17 (h) 0

End of Lesson