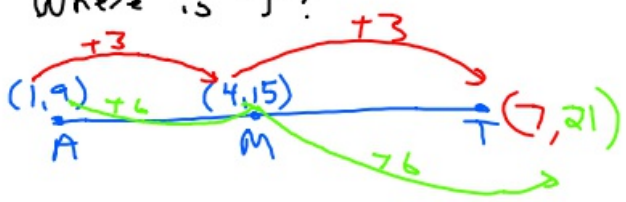
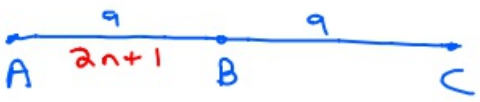
8-23-19 6th Geo

① On $\overline{AT}$, M is the midpoint. If M = (4, 15) and A = (1, 9), where is T?



② B is midpoint of $\overline{AC}$. If AC = 18 cm and AB = 2n+1, what is n?



$2n+1=9$
$-1 \quad -1$
$2n=8$
$n=4$

$AB+BC=AC$
$2n+1+2n+1=18$
$4n+2=18$
$n=4$

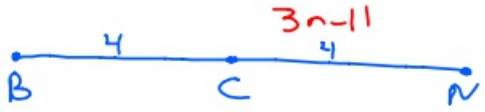
③ Let B be the midpoint of $\overline{AC}$ with AB = 9 and AC = 4n+6. Find n.

$4n+6=18$
$-6 \quad -6$
$\frac{4n}{4}=\frac{12}{4}$
$n=3$

④ T is midpoint of $\overline{NS}$ with $NT = 3n+1$ and $TS = 2n+4$. Find n.

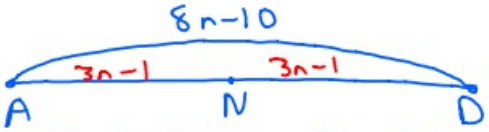
$$3n+1 = 2n+4$$
$$-2n \quad -2n$$
$$n+1 = 4$$
$$-1 \quad -1$$
$$n = 3$$

⑤ Let C be the midpoint of $\overline{BN}$ with $BC = 4$ and $CN = 3n-11$. Find n.



$$3n-11 = 4$$
$$+11 \quad +11$$
$$3n = 15$$
$$n = 5$$

⑥ Let N be the midpoint of $\overline{AD}$ with $AD = 8n-10$ and $AN = 3n-1$.



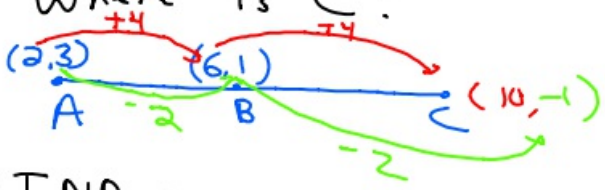
$$3n-1+3n-1 = 8n-10$$
$$6n-2 = 8n-10$$
$$-6n \quad -6n$$
$$-2 = 2n-10$$
$$+10 \quad +10$$
$$8 = 2n$$
$$n = 4$$

8-23-19 7th Geo

① B is midpoint of $\overline{AC}$.

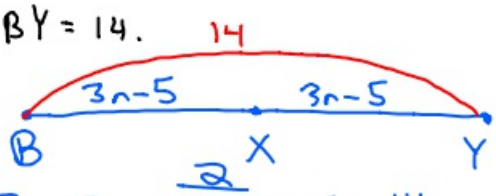
If A = (2,3) and B = (6,1),

where is C?



FIND n.

② Let X be the midpoint of $\overline{BY}$ with BX = 3n-5 and BY = 14.



1

$3n-5=7$

$+5\ +5$

$3n=12$

$n=4$

2

$3n-5+3n-5=14$

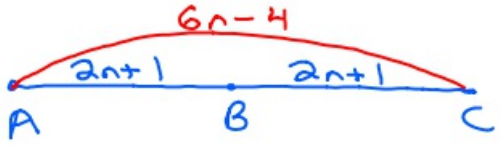
$6n-10=14$

$+10\ \ +10$

$6n=24$

$n=4$

③ Let B be the midpoint of $\overline{AC}$ with AB = 2n+1 and AC = 6n-4.



$2n+1+2n+1=6n-4$

$4n+2=6n-4$

$-4n\ \ \ -4n$

$2=2n-4$

$+4\ \ \ +4$

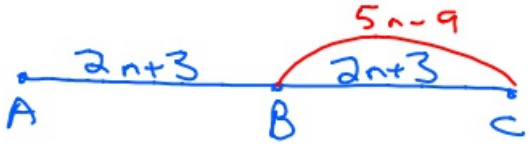
$6=2n$

$n=3$

④ Let T be the midpoint of $\overline{NS}$ with $NT = 3n+1$ and $TS = 2n+4$.

$$3n+1 = 2n+4$$
$$-2n \quad -2n$$
$$n+1 = 4$$
$$-1 \quad -1$$
$$n = 3$$

⑤ On $\overline{AC}$, B is midpoint with $AB = 2n+3$ and $BC = 5n-9$.



$$2n+3 = 5n-9$$
$$-2n \quad -2n$$
$$3 = 3n-9$$
$$+9 \quad +9$$
$$12 = 3n$$
$$n = 4$$