(1) (A) $2(x+13) = 2-3x$ = (B)

(2) Evaluate $|2b-5|+1$

$|2-5|+1$

$3+1 = 4$ = (D)

(3) 1 meter = 1.094

1 m =

1 km = 1000

2 X = 2000

1 mc = 1.094 yd

2000 X 1.094

2.188

2.188y → x

1 mi = 1760 y

x X 2188y

$\frac{2188}{1760} = 1.24$ mi

= (A)

(4) $4(t+1) = 6t-1$

$4t+4 = 6t-1$

$-2t = -5$

$\frac{-2}{-2} \quad \frac{-5}{-2}$

$t = 2\frac{1}{2}$ (A)

5) Solve $y - 18 = -3$

$y = +15$

B

6) (B) : ~~There~~ Three times x less than y is five times y plus two times x.

7: $\frac{5}{12}$ = (B)

8: 21 = (B)

9) $\frac{3}{5}x = 15$

$x = \frac{5}{15} \times \frac{5}{3}$

$x = 25$ = (C)

10) $|2x - 3y| + 5z$ if $x = -3$, $y = 4$, and $z = -1$.

$|(2x-3)|$

$|-6 - 12| + 5 \times -1$

$-18 + 5 = -23$ (b)

(11) $4 = 3n - 2$

$\frac{3}{3}n = \frac{6}{3}$ (B)

$n = 2$.

(12) $\frac{8}{3}$ $\frac{2}{3}$ and $\frac{4}{9}$ (A)

(13) $94°C = \frac{5}{9}(F - 32)$

$9H° = \frac{5}{9}F - 17.77$

$19 + 17.77$

$111.77 = \frac{5}{9}F \times \frac{9}{5}$ = (A)

$F = 111.77 \times \frac{9}{5}$

$(201°)F$.

14) $\frac{9}{2}\angle = \frac{-8H.}{6} = -1H.$

(C)

15) $\frac{6}{4} \times \frac{2}{1} = \frac{x}{H2} \times H2$

$x = 12$ (B)

16) $|(-5)| = 7$

$(-2, 12)$ (D)

(17)

$x - 3.5 = 12.7$

(A)

$x = \frac{12.7}{3.5}$

$16\ 2$

$x = 16.2$

(B)

$12 + 5x = 3$

$\frac{5x}{5} = \frac{9}{5}$

$x = \frac{9}{5}$

(18) (A)

$-x + 4 = x + 6$

$-x - x = 6 - 4$

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

$x = -1$

(B) $5n + 7 = 7(n+1) - 2n$

$5n + 7 = 7n + 7 - 2n$

$5n + 7 = 5n + 7$

$5n - 5n = 7 - 7$

$0 = 0$

19.

A. $\frac{r}{n} + L = 4r$ for r

$n \times \frac{r}{n} = (4r - L)n$

$r = (4r - L)n.$

B. $P = 2L + 2w$ for w.

$\frac{2w}{2} = \frac{P - 2L}{2}$

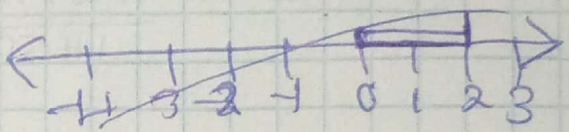
$w = \frac{P - 2L}{2}.$

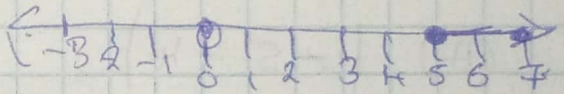
20. Solve each equation.

(A) $(5L - 1) = 6.$

$\frac{5L}{5} = \frac{7}{5}$

$L = \frac{7}{5}$

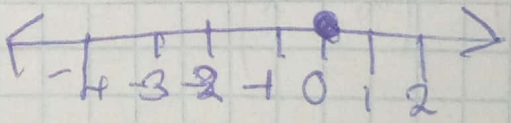




(B) $(2a + 1) = 1$

$\frac{2a}{2} = \frac{0}{2}$

$a = 0$



21. $2(8u+2) = 3(2u-7)$

1st = opening the bracket

2nd = collecting right terms together.

~~Minus~~ ~~subst~~ Subtracting $-6u$ on both sides.

3rd = subtracting -4 on both sides.

4th = dividing all through by 10.

22. 1450 Feet tall. — willow.

1127 feet tall — John.

1450 ≡ 3.

1127 ≡ x.

$x = \frac{1127 \times 3}{1450}$ $\frac{3381}{1450}$ = 2.33 metre tall

23.

(A) $|-5+4|$

(B) $|3+2|$

24. Supplement of a given angle is 10° more than twice its complement

Let $90-x$ — complement
$180-x$ — supplement.

$$(90-x)+10 = 180-x$$
$$180-2x+10 = 180-x$$
$$-2x+x = -10$$
$$-x = -10$$
$$x = 10.$$

25. 18500 people $\pm$ 1200 people.

$|18500 \pm 1200|$

(B) add 1200 to 18500 or subtract 1200 from 18500

(C) Maximum $= 18500 + 1200$
$= 19700$ people.

(D) Minimum $18500 - 1200$
$= 17,300$ people.

26. Boys $\frac{2}{5}$: 450

A $= \frac{5}{5} - \frac{2}{5} = \frac{3}{5}$ girls.

(B). $\frac{2}{5} \times 450$

$\frac{3}{5} \times x$ $\quad \frac{450 \times \frac{3}{5}}{\frac{2}{5}}$ $= \frac{270}{\frac{2}{5}}$ $= 675$ girls.

(C) Boys + girls

450 + 675 = 1125 students

27. $C = 6p + 200$

(A) Formula for p

$\frac{6p}{6} = \frac{C - 200}{6}$

$p = \frac{C - 200}{6}$

(B) $p = \frac{350 - 200}{6}$

$p = \frac{150}{6}$ = 25 people.