Show work to find the equation for each table

Ws Solutions

1

x	y
0	6
1	7
2	8
3	9
4	10

up 1

1x

Sub x = 0 ⇒ y = 6

Equation: 1(0) → 0 → add 6

$y = x + 6$

2

x	y
1	1
2	5
3	9
4	13
5	17

4

4x

x = 1

4(1)

4 → subtract 3 → y = 1

Equation:

$y = 4x - 3$

3

x	y
4	12
5	16
6	20
7	24

up 4 → 4x

x = 4

4(4)

16 → subtract 4 → y = 12

Equation:

$y = 4x - 4$

4

x	y
0	0
1	6
2	12
3	18

up 6

6x

x = 0

6(0)

0 → same → y = 0

Equation:

$y = 6x$

5

x	y
-2	6
-1	10
0	14
1	18

up 4 → 4x

x = -2

4(-2)

-8 → add 14 → y = 6

Equation:

$y = 4x + 14$

6

x	y
0	3
1	7
2	11
3	15

up 4 → 4x

sub x = 0

4(0)

0 → add 3 → y = 3

Equation:

$y = 4x + 3$

Determine the equation for each chart below

Ws

Solutions

x	y
−2	−22
−1	−12
0	−2
1	8
2	18

up 10 → 10x
Sub x=-2 → y=-22
10(-2) = -20
Need to subtract 2?
y = 10x − 2

x	y
−2	−10
−1	−9
0	−8
1	−7
2	−6

up 1 → 1x
Sub x=-2 → y=-10
1(-2) = -2
Subtract 8
y = x − 8

x	y
−2	18
−1	13
0	8
1	3
2	−2

down 5 → −5x
Sub x=-2 → y=18
−5(x)
−5(−2)
+10
So need to add 8
y = −5x + 8

x	y
−2	−14
−1	−7
0	0
1	7
2	14

up 7 → 7x
Sub in x=-2 → y=-14
7x
7(-2)
-14
Same
y = 7x

Make a chart for the following equations using x= -2 to x=+2

a) y= 2x +15

x	y
-2	11
-1	13
0	15
1	17
2	19

up 2

x=-2: 2x + 15; 2(-2)+15; -4 + 15; 11

x=-1: 2x + 15; 2(-1)+15; -2 + 15; 13

x=0: 2x+15; 2(0)+15; 0+15; 15

b) y= -x - 7

x	y
-2	-5
-1	-6
0	-7
1	-8
2	-9

down 1

y = −(x) − 7
x = -2
−(-2) − 7
2 − 7
−5

x = -1
y = −(x) − 7
−(-1) − 7
1 − 7
−6

x = 0
y = −(x) − 7
−(0) − 7
0 − 7
−7

c) y= -3x + 4

x	y
-2	10
-1	7
0	4
1	1
2	-2

x = -2
y = −3(x) + 4
−3(-2) + 4
6 + 4
10

x = -1
y = −3(x) + 4
−3(-1) + 4
3 + 4
7

x = 0
y = −3(0) + 4
0 + 4
4

Solve each equation. Ws Solutions Worksheet

1) $-4 = \frac{b}{10}$

$10 \cdot -4 = \frac{b}{10} \cdot 10$

$-40 = b$

2) $x + 2 = 16$

$x + 2 - 2 = 16 - 2$

$x = 14$

3) $-17 = -3 + n$

$-17 +3 = -3 +3 + n$

$-14 = n$

4) $\frac{a}{4} = 12$

$4 \times \frac{a}{4} = 12 \times 4$

$a = 48$

5) $p - 2 = -8$

$p - 2 +2 = -8 +2$

$p = -6$

6) $x + 5 = 24$

$x + 5 - 5 = 24 - 5$

$x = 19$

7) $-11 = \frac{a}{17}$

$17 \times (-11) = \frac{a}{17} \times 17$

$-187 = a$

8) $24 = 16 + p$

$24 - 16 = 16 - 16 + p$

$8 = p$

9) $x - 20 = -22$

$x - 20 +20 = -22 +20$

$x = -2$

10) $12 = -3 + n$

$12 +3 = -3 +3 + n$

$15 = n$

WS

Solutions

11) $-4+2n=-14$

$-4+4+2n=-14+4$

$2n=-10$

$\frac{2n}{2}=\frac{-10}{2}$

$n=-5$

12) $-21=k-7$

$-21+7=k-7+7$

$-14=k$

13) $210=-15n+30$

$210-30=-15n+30-30$

$180=-15n$

$\frac{180}{-15}=\frac{-15n}{-15}$

$n=-12$

14) $-26=-2r+4$

$-26-4=-2r+4-4$

$-30=-2r$

$\frac{-30}{-2}=\frac{-2r}{-2}$

$15=r$

15) $64=-16x-2$

$64+2=-16x-2+2$

$66=-16x$

$\frac{66}{-16}=\frac{-16x}{-16}$

$x=4.125$

16) $10=\frac{m}{5}+3$

$10-3=\frac{m}{5}+3-3$

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

$5\times 7=\frac{m}{5}\times 5$ $\Rightarrow$ $m=35$

17) $-5(2n+1)=15$

$-10n-5=15$

$-10n-5+5=15+5$

$-10n=20$

$\frac{-10n}{-10}=\frac{20}{-10}$ $\Rightarrow$ $n=-2$

18) $3(x-8)=21$

$3x-24=21$

$3x-24+24=21+24$

$3x=45$

$\frac{3x}{3}=\frac{45}{3}$

$x=15$

19) $-2(8-6x)=44$

$-16+12x=44$

$-16+16+12x=44+16$

$12x=60$

$\frac{12x}{12}=\frac{60}{12}$

$x=5$

20) $4(3n-1)=-88$

$12n-4=-88$

$12n-4+4=-88+4$

$12n=-84$

$\frac{12n}{12}=\frac{-84}{12}$

$n=-7$