DAY 2 – More Translating English to Math

Translate into TWO algebraic equations. Record let statements.

1. Yogi is 6 years older than Michelle. The sum of their ages is 26.

let Y be Yogi's age
let m be Michelle's age
$Y = 6 + M$
$Y + M = 26$

2. The cost of admission to Fantasy World theme park totaled $120.50 for a group of 11 children and 2 adults. The admission totaled $100 for another group consisting of 7 children and 3 adults.

let c be price of child
let a be price of adult
$120.50 = 11c + 2a$
$100 = 7c + 3a$

3. Two balloonists, Jim and Chris, are in separate balloons. Jim's balloon is 10 m above the ground and rising at 15 m per minute. Chris's balloon is at 30 m above the ground and rising at 10 m per minute.

let h be height
let m be minutes
Jim: $h = 10 + 15m$
Chris: $h = 30 + 10m$

4. The Mackenzie, the longest river in Canada, is 1056 km longer than the Yukon, the second-longest river. The total length of the two rivers is 7426 km.

let M be length of Mackenzie
let Y be length of Yukon
$M = 1056 + Y$
$M + Y = 7426$

5. A long distance phone service charges $7 a month plus $0.10 per minute of call time. Another plan charges $12 a month. Create equations for ONE month.

let C be cost
let m be minutes
1st: $C = 7 + 0.10m$
2nd: $C = 12$

6. Candace and Dino run computer repair services. For a service call, Dino charges $50, while Candace charges $40. In addition, they each charge an hourly rate. Dino charges $30/h and Candace charges $35/h

let C be cost
let h be hours
Dino: $C = 50 + 30h$
Candace: $C = 40 + 35h$

7. At Lisa's Sub Shop, two veggie subs and four roast beef subs cost $34. Five veggie subs and six roast beef subs cost $61.

let v be cost of veggie sub
let b be cost of beef sub
$2v + 4b = 34$
$5v + 6b = 61$

8. A restaurant that serves a buffet lunch has one price for adults and another price for children under 12. The Lopez family has two adults and three children under 12. Their bill was $49.00. The Zeid family has three adults and one child under 12. Their bill was $45.50.

let c be price of child
let a be price of adult
$49 = 2a + 3c$
$45.50 = 3a + 1c$

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More Review Graphing

Plot line 1, then line 2 over top. Find the coordinate point where they meet

9. $-2x - y = -8$
$x + y = 9$

Isolate y in Line 1:

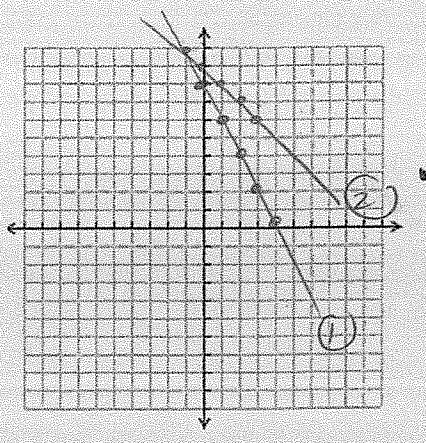
$-2x + 8 = y$

Isolate y in Line 2:

$y = 9 - x$

Line 1 m= $\frac{-2}{1}$ b= 8

Line 2 m= $\frac{-1}{1}$ b= 9



Therefore the meeting point is (-1, 10)

10. $x + 2y = -5$
$3x - y = -1$

Isolate y in Line 1:

$2y = -x - 5$

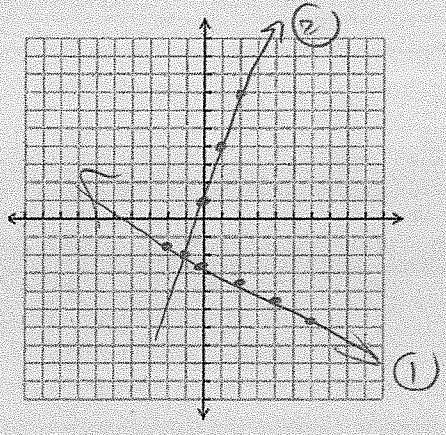
$y = \frac{1}{2}x - \frac{5}{2}$

Isolate y in Line 2:

$3x + 1 = y$

Line 1 m= $\frac{-1}{2}$ b= -2.5

Line 2 m= $\frac{3}{1}$ b= 1



Therefore the meeting point is (-1, -2)

11. $x + y = 7$
$x - y = -1$

Isolate y in Line 1:

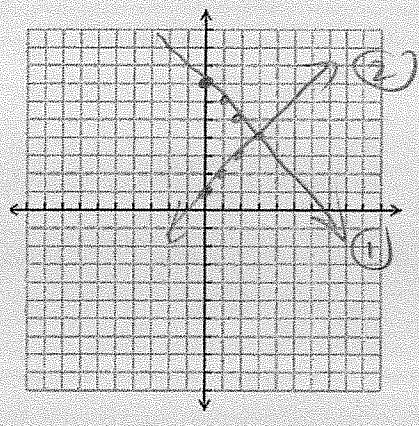
$y = -x + 7$

Isolate y in Line 2:

$x + 1 = y$

Line 1 m= $\frac{-1}{1}$ b= 7

Line 2 m= $\frac{1}{1}$ b= 1



Therefore the meeting point is (3, 4)

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