SECONDARY ACTIVITIES

It's In the Bag

Reprinted from The Math Post

Al, Bob, Chuck, Don, and Ed are running in a sack race. Halfway through the race, they are in these positions:

Al is 20 m behind Bob.

Bob is 50 m ahead of Chuck.

Chuck is 10 m behind Ed.

Don is 30 m ahead of Al.

Ed is 50 m behind Don.

Can you figure out who, at this point, is winning the race? Who is second? Third?

I've Earned My Stripes

Reprinted from The Math Post

(7.5, -3)
(5, -3)
(5, -1)
(-7, 0)
(-10, 0)
(-12, -1)
(-13, -4)
(-13, -10)
LINE ENDS

★
(-9, 0)
(-10, -5)
(-10, -7)
(-9, -5)
(-7, 0)
LINE ENDS

★
(-3, -1.5)
(-5, -8)
(-5, -10)
(-1, -2)
LINE ENDS

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(2, -2.5)
(0, -10)
(4, -3)
LINE ENDS

(-12, -10)
(-14, -10)
(-15, -12)
(-15, -14)
(-13, -14)
LINE ENDS

(-10, -10)
(-11, -9)
(-12, -10)
(-13, -13)
(-13, -14)
(-10, -15)
(-9, -14)
(-9, -13)
(-10, -10)
(-9, -10)
(-7, -11)
(-7, -14)
(-9, -14)
LINE ENDS

(-13, -9)
(-16, -9)
(-19, -11)
(-20, -13)
(-20, -15)
(-17, -18)
(-14, -19)
(-10, -20)
(-8, -21)
(-7, -23)
(-5, -23)
(-5, -21)
(-6, -19)
(-11, -17)
(-15, -16)
(-17, -14)
(-17, -13)
(-16, -12)
(-15, -12)
LINE ENDS

★
(-9, -18)
(-10, -19)
(-10, -17.5)
LINE ENDS

★
(-14, -19)
(-13, -17)
(-13, -19)
LINE ENDS

★
(-15, -16)
(-17, -17)
(-16, -15)
LINE ENDS

★
(-19, -16)
(-18, -15)
(-20, -15)
LINE ENDS

★
(-17, -14)
(-19, -12)
(-17, -13)
LINE ENDS

★
(-17, -10)
(-16, -11)
(-16, -9)
LINE ENDS

(9, 7)
(9, 5)
(8, -2)
(2, -15)
(2, -16)
(3, -16)
(3, -17)
(5, -17)
(6, -18)
(7, -17)
(8, -17)
(9, -16)
(13, -16)
(14, -17)
(16, -16)
(18, -16)
(18, -15)
(19, -15)
(19, -13)
(15, -7)
(12, -2)
(11, 5)
(11, 7)
LINE ENDS

(3, -16)
(4, -14)
(6, -12)
(8, -11)
(12, -12)
LINE ENDS

(9, -16)
(10, -14)
(11, -13)
(12, -12)
(14, -11)
(15, -11)
(17, -13)
(18, -15)
LINE ENDS

(15, -13)
(16, -15)
(16, -16)
LINE ENDS

(13, -13)
(13, -16)
LINE ENDS

(11, -15)
(11, -16)
LINE ENDS

(8, -14)
(7, -16)
(7, -17)
LINE ENDS

(6, -14)
(4, -16)
(5, -17)
LINE ENDS

(6, -8)
(8, -11)
LINE ENDS

(15, -9)
(14, -11)
LINE ENDS

(1, 17)
(0, 21)
(0, 24)
(3, 22)
(17, 22)
(20, 24)
(20, 21)
(19, 17)
LINE ENDS

(6, 10)
(3, 10)
(0, 8)
(1, 13)
(0, 12)
(2, 19)
(4, 21)

★
(7, 22)
(7, 21)
(8, 19)
(9, 18)
(11, 18)
(12, 19)
(13, 21)
(13, 22)

(16, 21)
(18, 19)
(20, 12)
(19, 13)
(20, 8)
(17, 10)
(14, 10)
LINE ENDS

(4, 16)
(5, 17)
(4, 15)
(4, 13)
(5, 12)
(8, 12)
(10, 14)
LINE ENDS

(8, 12)
(9, 11)
(9, 13)
LINE ENDS

★
(8, -1)
(10, -2)
(8, -2)
LINE ENDS

(10, 15)
(11, 13)
(12, 12)
(15, 12)
(16, 13)
(16, 15)
(15, 17)
(16, 16)
LINE ENDS

(11, 13)
(11, 11)
(12, 12)
LINE ENDS

(7, 12)
(6, 8)
(7, 7)
(13, 7)
(14, 8)
(13, 12)
LINE ENDS

(3, -13)
(-7, -13)
LINE ENDS

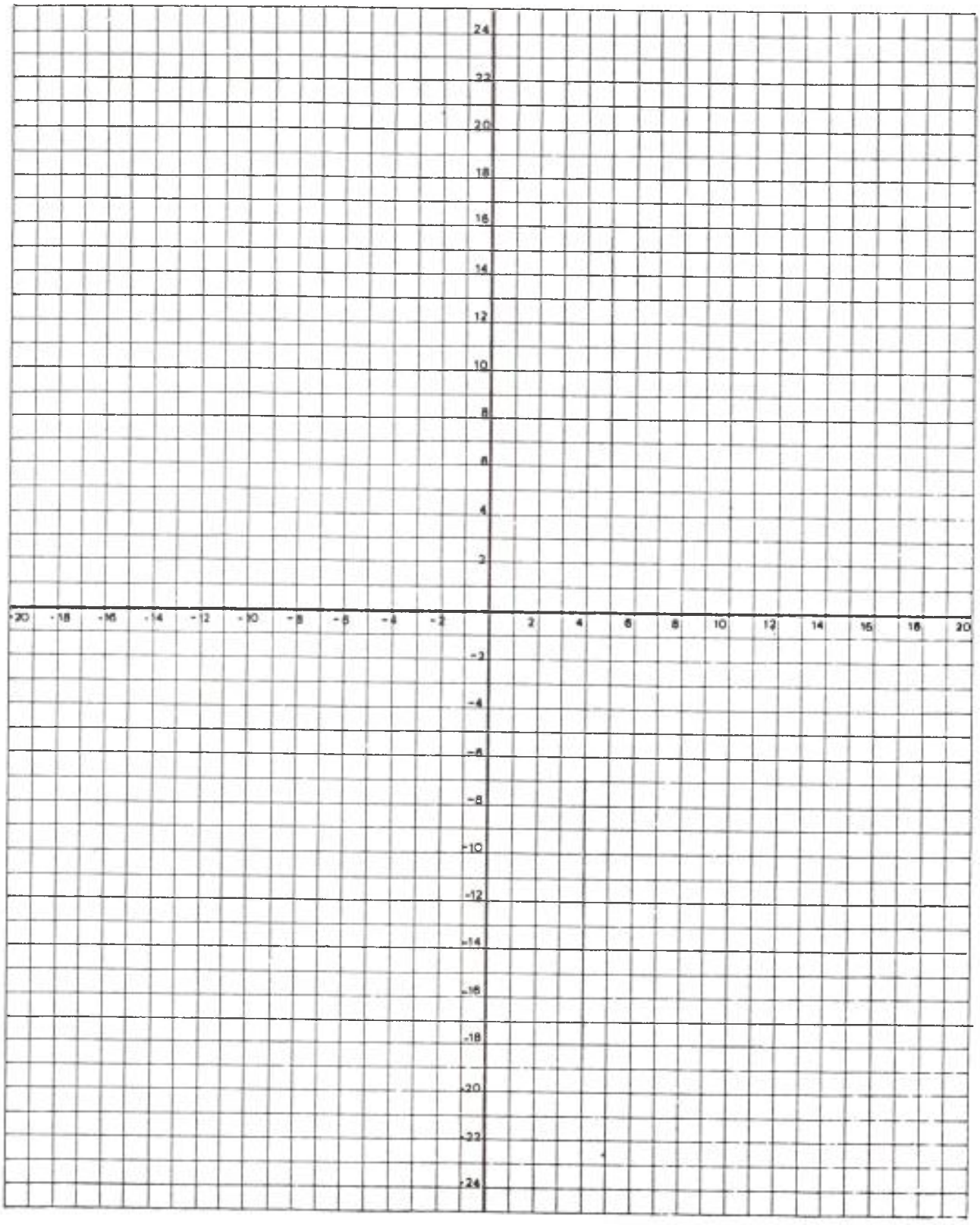
★
(12, -2)
(10, -4)
(12.5, -3)
LINE ENDS

★
(13.5, -5)
(12, -7)
(14.5, -6)
LINE ENDS

★
(7, -4)
(9, -6)
(6, -6)
LINE ENDS

★Shade these areas.

Name _____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-20
-22
-24

Trash

Reprinted from The Math Post

Materials Needed:

- Washers or tiles
- One empty waste basket
- One ream of paper (500 sheets)
- Balance scales and metric masses

NOTE: You may have to use the washers or tiles to make additional metric masses for this investigation.

1. How much trash has been placed in the waste basket in your room since school started this morning? Use your balance scales and other materials to find the mass of the trash. Keep a record of your work.

2. When school is out, how much trash do you think will be in the waste basket?

3. How much trash would all the rooms in your school throw away in one day? In one week? In one year? How accurate do you think your answers are? How could you improve the accuracy of your answers?

4. What is the mass of a ream (500 sheets) of paper? What should be the mass of 1000 sheets of paper?

5. How many sheets of paper are thrown away by your school each year? Hint: Use results from 3 and 4.

EXTENSION:

If all the trash from your school was compacted (pressed together) for one year, how much space would it take up?

Logicombo

Reprinted from The Math Post

Math Skills: Simultaneous linear equations
Whole number operations
Logic

Number of Players: 2

Materials: 

Three hexahedra dice
Game sheet (duplicate one sheet per player); one watch with a second hand, or a one-minute timer; one pencil per player.

Rules:

The object of the game is to reach or exceed a total score of 200 points.

The player whose first name begins with the letter closer to A is Player 1; the other player is Player 2.

Player 1 rolls the dice but does not allow Player 2 to see them. Player 1 places the dice in order from highest to lowest ($A \geq B \geq C$).

Player 2 asks for the following clues and records them on the game sheet in the appropriate columns:

- What is the sum of the larger two numbers? (A + B)
- What is the difference between the larger two numbers? (A - B)
- What is the sum of the smaller two numbers? (B + C)
- What is the product of the smaller two numbers? (BC)

Player 2 then has one minute to guess what the three numbers (A, B, C) are. Player 1 watches the watch or timer.

Scoring is as follows:

- If all three numbers are correctly guessed, score three times the sum of the three numbers.
- If only two numbers are correctly guessed, score two times the sum of the two numbers.
- If only one number is correctly guessed, score that number.
- If no numbers are correctly guessed, subtract the sum of the three numbers from the running total.

On the next turn, Player 2 rolls the dice, and Player 1 tries to guess the three numbers.

The first player to reach or exceed a total score of 200 is the winner.

Variations:

Ask for clues of A + B, A - B, A - C, and AC.

Ask for clues of B + C, BC, A - C, and AC.

Use 3 octahedra dice.

Name _____

LOGICOMBO

If A ≥ B ≥ C				Guess:			Actual:			Score	Running Total
A+B	A−B	B+C	BC	A	B	C	A	B	C		

Correct Guesses	Score
3	3 times sum of 3 numbers
2	2 times sum of 2 numbers
1	that number
0	subtract sum of 3 numbers