

Walking the Line

Scoring Paths - Handout

Instructions

Now you will make “walking paths” — numerical expressions — out of “tiles.”

Each tile has a number of points in the corner. Add up the points to get the score. Here are the tiles and the rules:

- You cannot use any tile twice in the same walking path.
- Your path cannot step outside the range (-15 to +15).
- You may not put two number tiles next to each other! Separate them with the +, -, or × tiles. So no two-digit numbers, and you can't do something like [7][-3] to make 4.
- Parentheses are free.

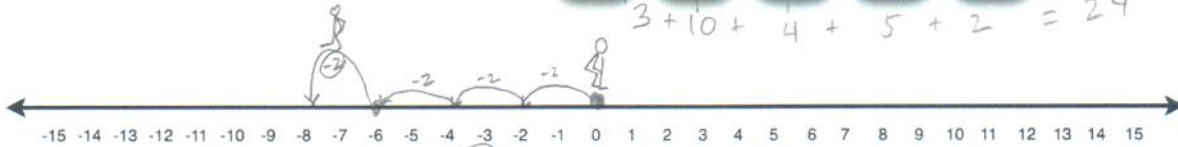


Your tasks

1. Illustrate this path to -8 on the number line.



$$3 + 10 + 4 + 5 + 2 = 24$$



2. Figure out how many points it gets.

24

3. Make a new path to -8 that scores higher than the sample above.

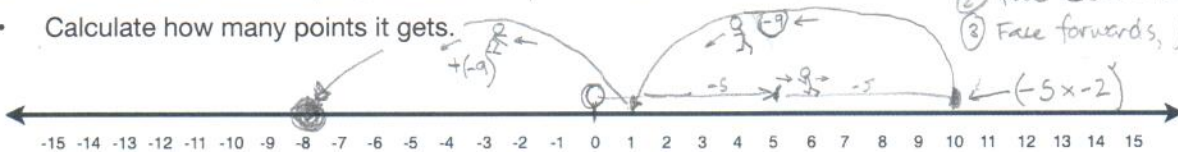


61

• Write the expression. $(-2 \times -5) - 9 + (-9) = -8$

• Draw the walk on the number line. Be sure you can tell which direction the dude is facing!

- Describe it in words. ① Face backwards, then take two steps back of 5 units each (at +10 now).
- Calculate how many points it gets. ② Face backwards, jump 9 (to +1)
- ③ Face forwards, jump BACK 9 (to -8)



4. Now your **poster challenge** is to get as high a score as you can with a path to positive 11. Good luck!

- Write the expression.
- Draw the walk on the number line.
- Describe it in words.
- Calculate how many points it gets.

Make sure your poster communicates your thinking!

- Finally, see if you can beat the score of your path to positive eleven. You can go to any number between -15 and +15. Put that path on your poster as well. describe it the same way you did the path to 11, and also explain why you picked the number you did.
- Be ready to demonstrate your paths on the class number line.