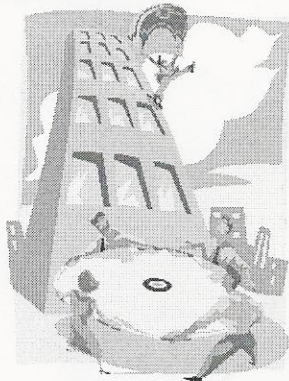


(Grade 7 Paired Rich Math Task) THE ELEVATOR



Heidi runs the elevator in an apartment building. She took Dr. Moresch up six floors from the floor on which he lives. Then Heidi went down five floors, where she picked up Dr. Posamentier. She took him down ten floors to the first-floor lobby. What is the number of the floor on which Dr. Moresch lives?

Learning Goal:

We are learning to add and subtract integers and use a variety of computational strategies to solve problems involving whole numbers and decimal numbers.

Success Criteria:

I will...

- Accurately interpret what the problem is about and what I am being asked to solve.
- Recognize the number of steps in the problem that need to be reversed, and what operations or inverse operations are involved to solve the problem.
- Make a plan that specifies starting with the result and working my way backwards.
- Write the steps in reverse order and solve accordingly, showing my calculations and communicating any necessary explanations using math words.
- Check my method to see if it works with +10 performing the steps in reverse order with the inverse operations.

Find Out

I have to find out what floor
 Dr. Moreish lives on.
 - Heidi took Dr. M up 6 floors (+6)
 - went down 5 floors (-5)
 - took Dr. P down 10 floors (-10)
 ending at lobby

Choose a Strategy



I will work backwards!
 - using pen and paper

Solve It

Dr. Moreish lives
 on the 10th floor.

Look Back

I see that my
 picture in the solving stage is
 a bit unclear but I did however
 get the right answer so my bads
 balance out my goods.

Dr. M < 15
 14
 13
 12
 11
 Dr. M < 10
 9
 8
 7
 6
 5
 4
 3
 2
 1

Find Out

Very good identification of steps going forward.

We need to find out what floor Dr. Morson lives on.

- Heidi took Dr. M up 8 floors (+8)

- Then she went down 5 floors (-5) picked Dr. P.

- took Dr. P down floors (-10) ending up lobby (+1)

Name: St Repalda

Solve It

Pictures, integer addition/subtraction

Sentences

$$3) (+1) + (+10) = (+11)$$

$$2) (+11) + (+5) = (+16)$$

$$1) (+16) + (-6) = (+10)$$

Step in reverse order.

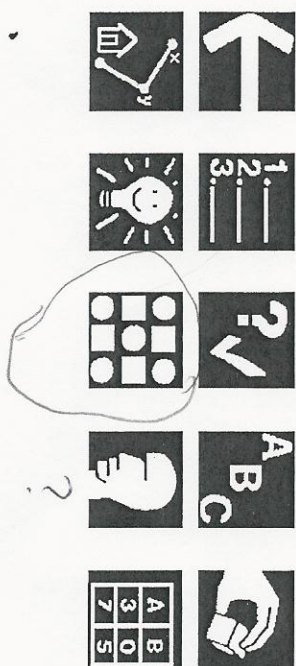
1) Start with (+1) lobby (+10)

2) Add 1 floor up 10 floors (+5)

3) Add 1 floor up (+5) floor

4) Add 1 floor up down 6 floors.

Choose a Strategy



What strategies did you use? last step and work you way add and subtract integers using number sentence?

Look Back

$$3) (+1) + (+10) = (+11)$$

$$2) (+11) + (+5) = (+16)$$

$$1) (+16) + (-6) = (+10)$$

Conclusion, try doing your method

to see if it works with +10

Performing the steps in reverse order

$$(+10) - (-6) = (+16)$$

$$(+16) - (+5) = (+11)$$

$$(+11) - (+1) = (+10)$$

lobby

Name: Catherine**Find Out**

We need to find out Dr. Moren's live in.

- Heidi took Dr. Moren up 6 floors (+6)
- Then she went down 5 floors (-5)
- took Dr. M down 10 floors (-10) ending up at lobby (+1)

Solve It

$$\begin{aligned}
 (+1) + (+10) &= (+11) \\
 (+11) + (+5) &= (+16) \\
 (+16) + (-6) &= (+10)
 \end{aligned}$$

Choose a Strategy

- pictures integer addition/subtraction sentences.

Look Back

We found the integers of the floors. We added them together and we found out that Dr. Moren lives on the 10th floor.