

2.OA, MD Delayed Gratification

Task

You won first place at your school Science Fair! You have two choices for the prize:

Option 1: You can take \$20 home with you today.

Option 2: Take \$2 a day for the next 15 days.

- a. Which option earns more money? How much more?
- b. Which option will you choose? Explain why.

IM Commentary

The purpose of this task is for students to compare two options for a prize where the value of one is given \$2 at a time, giving them an opportunity to "work with equal groups of objects to gain foundations for multiplication." This context also provides students with an introduction to the concept of delayed gratification, or resisting an immediate reward and waiting for a later reward, while working with money.

This task would work well with partners so that students can discuss options and check each other's work. Students should discover that while they can take the money now, if they wait, they will receive 10 more dollars. After the students have answered questions (a) and (b), ask the class:

Even though you would earn more with Option 2, why might some people want to choose Option 1?

Reasons students might give include things like wanting to buy a present for someone who has a birthday very soon, needing the money to buy lunch or some groceries, or simply being impatient. The task presents an opportunity for the teacher to discuss the idea of being patient and planning ahead. The teacher can change the numbers to be higher or lower as a way of differentiating instruction.

This task is part of a set collaboratively developed with *Money as You Learn*, an initiative of the President’s Advisory Council on Financial Capability. Integrating essential financial literacy concepts into the teaching of the Common Core State Standards can strengthen teaching of the Common Core and expose students to knowledge and skills they need to become financially capable young adults. A mapping of essential personal finance concepts and skills against the Common Core State Standards as well as additional tasks and texts will be available at <http://www.moneyasyoulearn.org>.

Solutions

Solution: A third approach to finding the value of Option 2

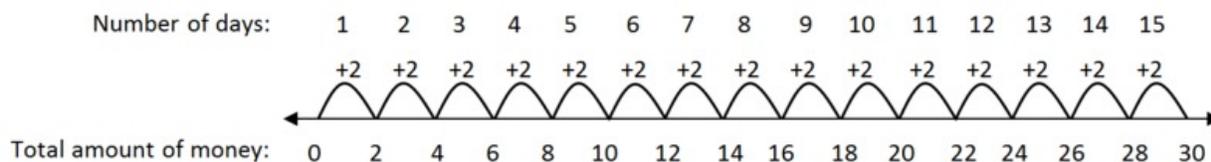
I know that if I make \$1 a day for 15 days I would make \$15. \$2 a day for 15 days would be \$30 because $15 + 15 = 30$.

Solution: A fourth approach to finding the value of Option 2

Students can Use fake money: they can count out fifteen \$2 bills and then count by twos as they put them down.

Solution: 1

a. Using a number line or number grid, count by twos 15 times.



1	2	3	4	5	6	7	8	9	10
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11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Option 2 is worth \$30.

Since $\$30 - \$20 = \$10$, Option 2 is worth 10 more dollars than Option 1. (Note that by the end of second grade, students should be able to compute this difference mentally; see 2.NBT.B.8 and 2.NBT.B.5. To see the types of strategies that students might use before reaching this milestone, see 1.NBT.C.6)

b. Students might answer either Option 1 or Option 2 to this question. Most students are likely to choose Option 2 because it is the larger amount, although some some may choose Option 1 if they would rather take the money now than wait. The purpose of asking part (b) is to set up the discussion about delayed gratification described in the commentary.

Solution: A second approach to finding the value of Option 2

$2 + 2 + 2 + 2 + 2 = 10$. Therefore, every 5 days I would make 10.

$5 + 5 + 5 = 15$ days.

$\$10 + \$10 + \$10 = \30 in 15 days. I would make \$30 if I choose Option 2.



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