

Name _____



TEST # **3**

January 2015 Rookie Level

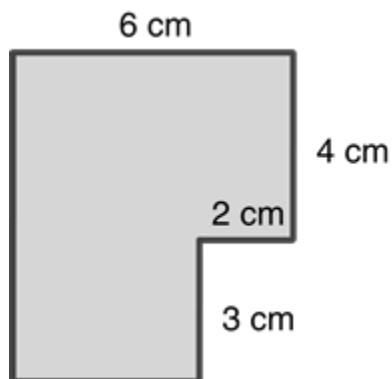
1) Pedro gave Carmen a number. He told her to add 5 to the number and double the sum. Her answer was 40. What number did Pedro give Carmen?

2) Consecutive numbers are counting numbers that follow in order such as 1, 2, 3, and so forth. Find three consecutive numbers that add up to 60. What is the largest of the three numbers?

3) The library charges 15 cents a day fine for the first three days and then 5 cents per day after the third day. Meredith paid a \$1 fine. How many days was her book overdue?

4) Mrs. Thompson has 36 students in her class. If there are four girls for every 2 boys, how many girls are there?

5) Find the area of this shape.



6) Jeremy is between 20 and 60 years old. If you divide his age by 4, there will be no remainder. Next year you will be able to divide his age by 7 without a remainder. How old is Jeremy now?

January 2015 Rookie Level Answers

1) Pedro gave Carmen a number. He told her to add 5 to the number and double the sum. Her answer was 40. What number did Pedro give Carmen?

15

2) Consecutive numbers are counting numbers that follow in order such as 1, 2, 3, and so forth. Find three consecutive numbers that add up to 60. What is the largest of the three numbers?

21

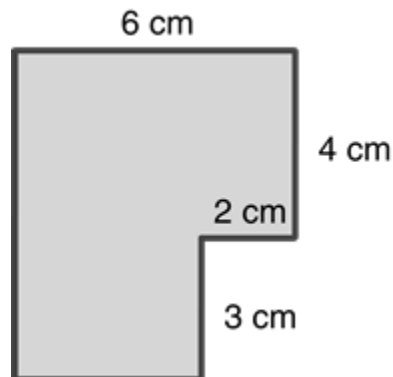
3) The library charges 15 cents a day fine for the first three days and then 5 cents per day after the third day. Meredith paid a \$1 fine. How many days was her book overdue?

14

4) Mrs. Thompson has 36 students in her class. If there are four girls for every 2 boys, how many girls are there?

24

5) Find the area of this shape.


 36cm^2

6) Jeremy is between 20 and 60 years old. If you divide his age by 4, there will be no remainder. Next year you will be able to divide his age by 7 without a remainder. How old is Jeremy now?

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January 2015 Rookie Level Solutions

1) Students can use trial and error to find the answer or work backwards. Start with 40 and divide it in half to get 20. Subtract 5 and you will have 15, the number that Pedro gave to Carmen. You can then work the problem forwards to check your answer.

15

2) Find three consecutive numbers that add up to 60. You can divide 60 by three to get an average (or the middle number). 20 is the average. The three consecutive numbers are 19, 20, and 21. The largest of the three numbers is 21.

21

3) The library charges 15 cents a day fine for the first three days and then 5 cents per day after the third day. Meredith paid a \$1 fine. The first three days would be 45 cents leaving an additional 55 cents she paid. If the additional days are 5 cents, then there were $(55 \div 5) = 11$ additional days. Three days + 11 additional days made her book 14 days overdue.

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January 2015 Rookie Level Solutions

4) Mrs. Thompson has 36 students in her class. There are four girls for every 2 boys. This is a ratio of 4:2 which if you divide the total 36 into 6 equal groups, then 4 groups would be girls and 2 groups would be boys. $36 \div 6$ groups yields 6 people in each group. So $4 \times 6 = 24$ girls and $2 \times 6 = 12$ boys. Younger students could actually draw this problem out - drawing 4 girls and then 2 boys until they have 36 students.

24

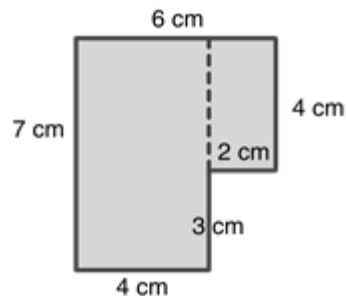
5) Divide the figure into two rectangles and find all missing lengths.

The larger rectangle has an area of:

$$4\text{cm} \times 7\text{cm} = 28\text{cm}^2$$

The smaller rectangle has an area of:

$$4\text{cm} \times 2\text{cm} = 8\text{cm}^2$$



If we combine these we will find the total area:

$$28\text{cm}^2 + 8\text{cm}^2 = 36\text{cm}^2$$

36cm²

6) Since Jeremy is between 20 and 60 years old and there is no remainder if you divide his age by 4, make a chart of possible ages now. Then make another chart for next year's age and it will be a multiple of 7. Jeremy is 48 this year and will be 49 next year.

THIS YEAR	24	28	32	36	40	44	48	52	56
NEXT YEAR	28	35	42	49	56				

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