Word Problems Leading to Equations

Grade 7 Place Value Worksheet

Date:_____   Name:_____

LET'S MAKE WORD PROBLEMS LEADING TO EQUATIONS EASY

Solve the following problems

1. Form equation for this statement: A number divided by 5 gives seven less than twice the number

2. What is the number which when multiplied by 20 gives the product 120?

3. A number is as much greater than 21 a it is less than 71. Find the number.

4. A number added to its half gives 72. Find the number

5. Twice a number when decreased by 7 gives 15. Find the number.

6. Nine added to thrice a whole number gives 45. Find the number.

7. If the smaller of two consecutive odd integers is doubled, the result is 7 more than the larger integer. Find the two integers.

8. Find 3 odd consecutive numbers whose sum is 27.

9. Find 3 consecutive numbers whose sum is 45.

10. Take any number. Multiply it by 3. Add 49 and divide the result by 7 then we get 7. Express this in the form of an equation.

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Answers

1. Let's denote the number as x
   $\frac{x}{5} = 2x - 7$

2. Let's denote the number as x
   x × 20 = 120
   x = 6

3. Let's denote the number as y
   y = 46

4. Let's denote the number as x
   x = 48

5. Let's denote the number as x
   x = 11

6. Let's denote the number as x
   x = 12

7. The two consecutive odd integers are 9 and 11.

8. The solution is 7,9, and 11.

9. The solution is 14,15, and 16.

10. Let's denote the number as x.
    $\frac{3x+49}{7} = 7$

Answer Explanation

1. Let's denote the number as x
   $$\frac{x}{5} = 2x - 7$$

2. Let's denote the number as x
   x × 20 = 120
   x = 6

3. Let's denote the number as y
   y - 21 = 71 - y
   2y = 71 + 21
   2y = 92
   $y = \frac{92}{2}$
   y = 46

4. Let's denote the number as x
   $x + \frac{x}{2} = 72$
   $\frac{3x}{2} = 72$
   3x = 144
   x = 48

5. Let's denote the number as x
   2x - 7 = 15
   2x = 15 + 7
   2x = 22
   x = 11

6. Let's denote the number as x
   9 + 3x = 45
   3x = 45 - 9
   3x = 36
   x = 12

7. Let's denote the smaller odd integer as x,
   and the larger consecutive odd integer as x+2 since consecutive odd integers have a difference of 2.
   According to the given information:
   If the smaller integer (x) is doubled, the result is 7 more than the larger integer (x+2):
   2x=(x+2)+7

Now, let's solve for x:

2x=x+9

x=9

So, the smaller odd integer is x=9, and the larger consecutive odd integer is x+2=11.

Therefore, the two consecutive odd integers are 9 and 11.

8. Let's denote the three consecutive odd numbers as x, x+2,and x+4 since consecutive odd numbers have a difference of 2.

So, therefore: x+x+2+x+4=27

3x+ 6 = 27

3x = 21

x = 7

Therefore, the solution is 7,9, and 11.

9. Let's denote the three consecutive numbers as x, x+1, and x+2. The consecutive numbers have a difference of 1.

So, we have: x + x+1 + x+2 = 45

3x + 3 = 45

3x = 42

x= 14

Therefore, the solution is 14,15, and 16.

10. Let's denote the number as x.

$\frac{3x+49}{7} = 7$