

Name: \_\_\_\_\_

Secret Mission: You have been hired to develop and evaluate robots' math skills. Sometimes, they give thorough, correct explanations. However, they occasionally go haywire.

Robot Rita was given a math problem to solve.

Jessica has a messy desk. She has a total of 34 markers, pens, and pencils.

She has 4 times as many markers as pens.

She also has 4 more pencils than pens.

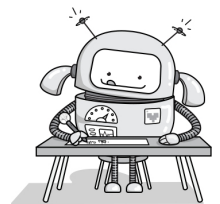
How many markers does she have?

How many pens does she have?

How many pencils does she have?

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Robot Rita thinks this might be the answer:



Let  $x$  represent the number of pens

Markers:  $4x$

Pencils:  $x+4$

Total:  $x+4x+x+4=34$

$6x+4=34$

$6x=30$

$x= (5=5)$  5 pens

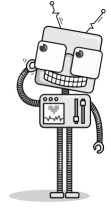
Markers:  $4(5)=20$  markers

Pencils:  $5+4=9$  pencils. Answer: 20, 5, 9.

---

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She is not sure that is correct, so she asked Robot Rob for help. This is how he tries to solve the problem.



Let's denote the number of pens as  $x$ , the number of markers as  $4x$  (since she has 4 times as many markers as pens), and the number of pencils as  $x+4$  (since she has 4 more pencils than pens).

According to the problem, she has 34 markers, pens, and pencils in total, so we can set up the following equation:

$$x \text{ (pens)} + 4x \text{ (markers)} + x+4 \text{ (pencils)} = 34$$

Combining like terms, we get:

$$6x + 4 = 34$$

Subtract 4 from each side:

$$6x = 30$$

Then divide each side by 6:

$$x = 5$$

So, Jessica has 5 pens. Substituting  $x=5$  into the expressions  $4x$  and  $x+4$ , we find that she has 20 markers and 9 pencils.

If you were the teacher, how would you grade Robot Rob's work? Explain and also make comments in Robot Rob's work.

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Hint: EdHelper's answer pages gave this answer.

**She has 20 markers, 5 pens, and 9 pencils.**

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Now that you have seen edHelper's answer and how Robot Rita and Robot Rob tried to solve this problem, how would you solve it? Show your steps and explain.

Jessica has a messy desk. She has a total of 34 markers, pens, and pencils.

She has 4 times as many markers as pens.

She also has 4 more pencils than pens.

How many markers does she have?

How many pens does she have?

How many pencils does she have?

**Name:** \_\_\_\_\_

Now it's your turn. You've seen how the robots tried to solve this problem, and you corrected their work. Now you try doing it!

Holly has a messy desk. She has a total of 39 markers, pens, and pencils.

She has 4 times as many markers as pens.

She also has 3 more pencils than pens.

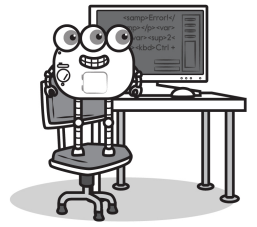
How many markers does she have?

How many pens does she have?

How many pencils does she have?

Name: \_\_\_\_\_

Robot was given a math problem to solve.



Kevin was in charge of making posters for Youth Against Violence Day. He was given \$25 to spend on supplies. He spent \$10.71 for poster board and \$8.78 for paints. How much money did he have left?

Robot wrote this program in Python to solve it.

```
# Given variables
```

```
total_money = 25.00
```

```
poster_board = 10.71
```

```
paints = 8.78
```

```
# Calculate and print the remaining money
```

```
remaining_money = total_money - poster_board - paints
```

```
print(remaining_money)
```

Robot's program will print the answer to the math problem.

What will the program print out? Fill in the blanks.

\_\_\_\_ . \_\_\_\_ \_\_\_\_



### Hint and a Question

In the program, "total\_money" is called a variable.

It is used to store a value. Name two other variables used in the program.

Name: \_\_\_\_\_

Change  $\frac{3}{6}$  to a decimal.

Reduce  $\frac{24}{64}$  to its lowest terms.

28 is what percent of 140?

Write each as a decimal.

$$12\frac{9}{10} =$$

$$16\frac{16}{100} =$$

$$2\frac{28}{100} =$$

$$10\frac{87}{100} =$$

$$2\frac{61}{100} =$$

$$5\frac{5}{10} =$$

$$\begin{array}{r} \frac{2}{7} \\ \frac{1}{7} \\ + \frac{6}{7} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{6}{10} \\ - \frac{3}{10} \\ \hline \end{array}$$

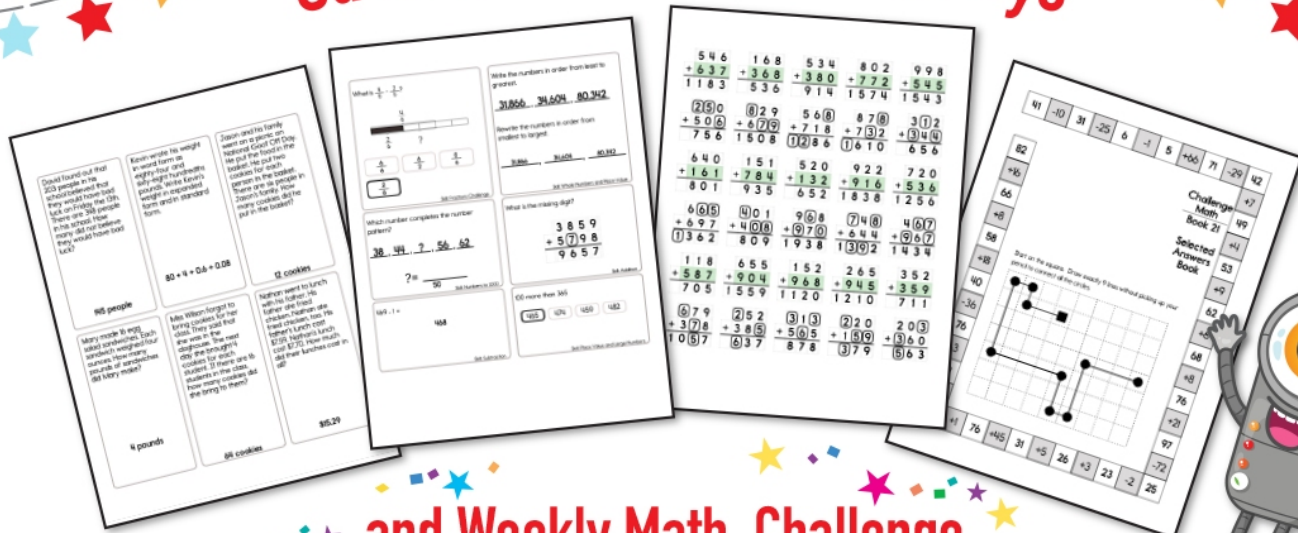
$$\begin{array}{r} 18.68 \\ 226.383 \\ 2.524 \\ + 9.119 \\ \hline \end{array}$$

Write the decimal in words.  
11.55555

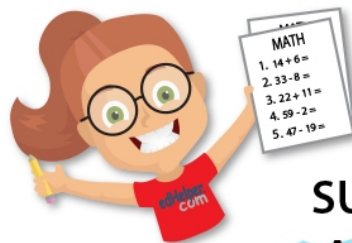
$$\begin{array}{r} 6 \\ - 3\frac{1}{9} \\ \hline \end{array}$$

$$9 \times 5 =$$

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It's NO PREP  
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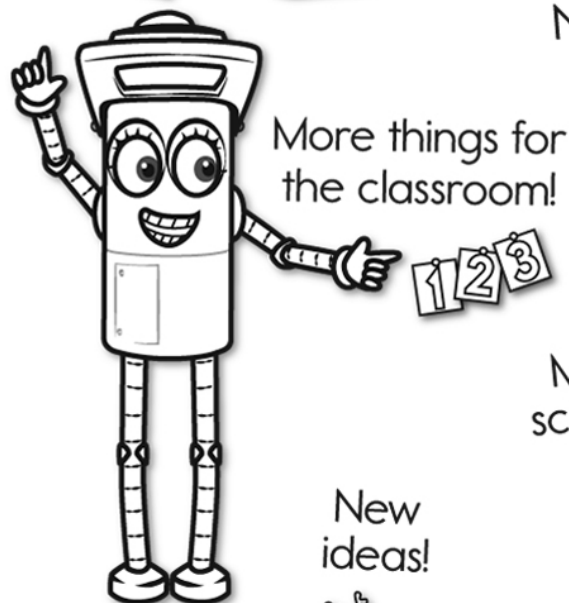
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