

Lesson 6.1, Question 12

- Step 1** Sketch balance scales to represent the equation $3a + 5 = 29$.
Place the unknown masses in the left pan
- Step 2** To isolate the unknown masses, which mass will you remove from the left pan? _____
To keep the scales balanced, which mass will you remove from the right pan? _____
The mass you will remove plus which other mass equals 29 g? _____
Replace 29 g with these 2 masses. Sketch the balance scales to show the removal.
- Step 3** How many unknown masses are in the left pan? _____
How many equal masses do you need in the right pan? _____
What is the mass of each equal mass? _____ Sketch the balance scales.
- Step 4** What mass does each a balance? _____
What is the solution to the equation $3a + 5 = 29$? _____
- Step 5** Verify the solution.
3 times ____ plus Breanna's \$5 is: ____ + \$5 = ____
Is your answer the money needed to buy the game? Explain.

- Step 6** Compare your balance scales to those in Breanna's solution.
Where did Breanna go wrong? _____
Describe her error. _____

Step-by-Step 2**Lesson 6.2, Question 10**

Step 1 Let n represent the number of students who attended the dance.

The cost for each student is \$2.

The cost for n students is: _____

The disc jockey charged a flat rate of \$85.

An algebraic expression for the cost of the disc jockey for n students is: _____

The disc jockey was paid \$197.

The equation is: _____

Step 2 Use algebra to solve the equation.

How many students attended the dance? _____

Step 3 To verify the solution, substitute the solution from *Step 2* into the original equation.

Left side =

Right side =

=

=

=

Is your solution correct? Explain. _____

Lesson 6.3, Question 11

Step 1 Let n represent the number of treats that were in the bag.

The treats are shared equally among 5 students.

The number of treats each student gets is: _____

Each student gives one treat to the teacher.

An algebraic expression for the number of treats each student has left is: _____

Each student has 9 treats.

The equation is: _____

Is Jerry's equation correct? Explain. _____

Step 2 Use algebra to solve the equation $\frac{n}{5} - 1 = 9$. Show all steps.

How many treats were in the bag? _____

Step 3 To verify the solution, substitute the solution from *Step 2* into the original equation.

Left side = _____ Right side = _____

=

=

=

Is your solution correct? Explain. _____

Lesson 6.4, Question 13

Step 1 Use the distributive property to expand $2(x + 20)$: _____

Is the product $2x + 20$? _____

Are $2x + 20$ and $2(x + 20)$ equivalent? _____

Step 2 Draw algebra tiles to represent $3x + 7$.

Draw algebra tiles to represent $10x$.

Are $3x + 7$ and $10x$ equivalent? _____

Step 3 Use the distributive property to expand $2(t + 3)$: _____

Is the product $6 + 2t$? _____

Use the order of addition. Write $6 + 2t$ in a different way. _____

Are $2(t + 3)$ and $6 + 2t$ equivalent? _____

Step 4 Add: $3 + 4 = \underline{\quad}$; $4 + 3 = \underline{\quad}$

What number property does this represent? _____

Are $9 + x$ and $x + 9$ equivalent? Explain. _____

Lesson 6.5, Question 9

Step 1 Let p represent the original price of a T-shirt.

The T-shirt is reduced by \$5.

The new price of the T-shirt is: _____

Jason bought 6 T-shirts.

An algebraic expression for the cost of 6 T-shirts is: _____

The total cost of the T-shirts, before taxes, was \$90.

The equation is: _____

Step 2 Solve the equation in *Step 1* using the distributive property. Show all steps.

What was the price of a T-shirt before it was reduced? _____

Step 3 To verify the solution, substitute the solution from *Step 2* into the original equation.

Left side =

Right side =

=

=

=

Is your solution correct? Explain. _____

Lesson 6.6, Question 12

Step 1 An equation for the relation is: $m = 100 - 2n$

Complete the table of values by substituting each value of n .

n	m
1	
2	
3	
4	
5	
6	

Why did we not use negative values for n ? _____

Step 2 Herbie has a mass of 60 kg.

Which variable represents Herbie's mass in kilograms? _____

Replace that variable in the equation with 60.

Use algebra to solve the equation.

What is the solution to the equation? _____

How many months did Herbie train? _____

Step 3 Look at the table of values in *Step 1*.

What pattern do you see in the n -values? _____

What pattern do you see in the m -values? _____

Use these patterns to extend the table to $n = 7$.

What was Herbie's mass after he had trained for 7 months? _____

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Step-by-Step 7

Lesson 6.7, Question 11

Step 1 An equation for the relation is: $m = 8n + 12$

Complete the table of values by substituting each value of n .

n	m
0	
1	
2	
3	
4	
5	
6	

Step 2 Graph the data in the table of values.

Choose a scale for the horizontal axis:

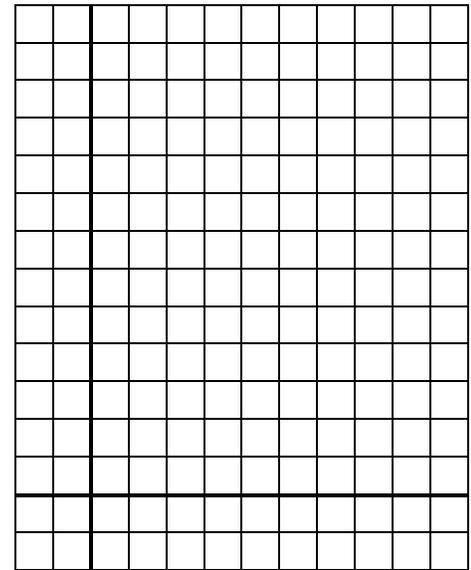
1 square = _____

Choose a scale for the vertical axis:

1 square = _____

Did you join the points in the graph?

Why or why not? _____



Step 3 Describe the relationship between the variables

in the graph: As n _____ by _____,

m _____ by _____.

The points lie on a _____ that

goes _____ to the right.

Step 4 Look at the table of values and look at the graph.

Is the relation linear? _____

How do you know? _____
