

Click here or on the images above to see even more math error analysis tasks for your specific grade level!

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ABOUT THIS RESOURCE

This free resource includes 16 error analysis math tasks for multi-step word problems. These error analysis math tasks are available in two levels.

Level 1 – In this level, there are 10 error analysis math tasks that involve all four operations (basic math facts only). These are ideal for mid to end of 3^{rd} grade, beginning of 4^{th} grade, or remediation for 4^{th} and 5^{th} grade students.

Level 2 – In this level, there are 6 error analysis math tasks that involve all four operations (requiring multi-digit multiplication and division). These are ideal for mid to end of 4th grade or 5th grade students.

Each error analysis task includes a word problem and a sample student work (shown in a few different formats throughout the tasks) that incorrectly solves the problem. The incorrect student work is in a box to help the students quickly find it each time. The student is asked to determine the error and explain why he or she thinks the student made that error. Then the student has to solve the problem correctly.

The errors include skipping steps, choosing the wrong operation, or miscalculations.

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These tasks can be used for independent work, math centers, homework, test prep, RTI, or even as a means of assessment.

LEVEL 1 ERROR ANALYSIS MATH TASKS

In this level, there are ten error analysis math tasks that involve all four operations (basic math facts only). These are ideal for mid to end of 3rd grade, beginning of 4th grade, or remediation for 4th and 5th grade students.

Name:

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.



Answer Key

Name:

Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Krista bought 4 bunches of bananas. Each bunch had 6 bananas on it. If she used 5 bananas for banana bread, how many bananas were left?



Krista had 5 bananas left.

What did the student do wrong? Why do you think the student made this error?

Student Work

The student added 4 and 6 instead of multiplying. Solve the problem correctly. Explain your thinking.

Step 1: $4 \times 6 = 24$ bananas in all because there are 4 bunches of 6

Step 2: 24 - 5 = 19 bananas left because she used 5 of her total amount

Solution: Krista had 19 bananas left.

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Alex made 2 snowballs. Haim made 3 more snowballs than Alex. 7eke made 3 times as many snowballs as Haim and Alex combined. How many snowballs did Zeke make?



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Name: _____Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Alex made 2 snowballs. Haim made 3 more snowballs than Alex. Zeke made 3 times as many snowballs as Haim and Alex combined. How many snowballs did Zeke make?

tudent Work

- Step 1: 2 + 3 = 5 snowballs that Haim made
- Step 2: 3 x 5 = 15 snowballs
 - Solution: Zeke made 15 snowballs.

What did the student do wrong? Why do you think the student made this error?

The student did not combine the amount of snowballs that Haim and Alex both made before multiplying. Solve the problem correctly. Explain your thinking.

Step 1: 2 + 3 = 5 snowballs that Haim made

Step 2: 5 + 2 = 7 snowballs that Haim and Alex made combined

Step 3: $3 \times 7 = 21$ snowballs that Zeke because it was 3 times as many

Solution: Zeke made 21 snowballs.

2

Jennifer Findley

30

6

6

Name:

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Sky has 5 different packs of bubble gum. Each pack contains 7 pieces of gum. Her friend Chase gives her 6 more pieces of gum. How many pieces of gum does she have?

What did the student do wrong? Why

do you think the student made this error?







Solve the problem correctly. Explain your thinking.

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30

6

6

Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

5

x_7_

30

Sky has 5 different packs of bubble gum. Each pack contains 7 pieces of gum. Her friend Chase gives her 6 more pieces of gum. How many pieces of gum does she have ?

What did the student do wrong? Why do you think the student made this error?

Student Work

The student incorrectly multiplied 5 x 7 to equal 30, instead of 35. Solve the problem correctly. Explain your thinking.

Sky has 36 pieces of gum.

Step 1: $5 \times 7 = 35$ total pieces of gum

Step 2: 35 + 6 = 41 pieces of gum

Solution: Sky has 41 pieces of gum.

3

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Name:

) Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Simon had 21 toy cars. He gave 3 of the cars to his cousin. He then divided the remaining cars equally into 9 bins. How many cars did Simon put into each bin?



Answer Key

Name:

Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Simon had 21 toy cars. He gave 3 of the cars to his cousin. He then divided the remaining cars equally into 9 bins. How many cars did Simon put into each bin?



Step 2: 18 - 9 = 9 toy cars in each bin

Solution: Simon put 9 toy cars into each bin.

What did the student do wrong? Why do you think the student made this error?

The student incorrectly subtracted 18 - 9 instead of dividing.

Solve the problem correctly. Explain your thinkina.

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Step 1: 21 - 3 = 18 toy cars
remaining
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Step 2: $18 \div 9 = 2$ toy cars

Solution: Simon put 2 toy cars into each bin.

Name: Date: Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

At the arcade, Mohammed wins 14 tickets playing Skee-Ball and 16 tickets playing Whack-A-Mole. Neon bracelets cost five tickets each. How many neon bracelets can he get with his tickets?



What did the student do wrong? Why do you think the student made this error? Solve the problem correctly. Explain your

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Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

At the arcade, Mohammed wins 14 tickets playing Skee-Ball and 16 tickets playing Whack-A-Mole. Neon bracelets cost five tickets each. How many neon bracelets can he get with his tickets?

Step 1: 14 + 16 = 20 tickets in all

udent Work Step 2: $20 \div 5 = 4$ neon bracelets

Solution: Mohammed can get 4 neon bracelets.

What did the student do wrong? Why do you think the student made this error?

The student added 14 and 16 incorrectly, which also affected Step 2.

Solve the problem correctly. Explain your thinkina.

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Step 1: 14 + 16 = 30 tickets in all
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Step 2: $30 \div 5 = 6$ neon bracelets

Solution: Mohammed can get 6 neon bracelets.

5

Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Cece had 64 crayons. She divided her crayons evenly into 8 different boxes. Her sister Esme opened one of the boxes and took out 3 of the crayons. How many crayons were left in the box Esme opened?



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Answer Key

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Jennifer Findley

Name:

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Cece had 64 crayons. She divided her crayons evenly into 8 different boxes. Her sister Esme opened one of the boxes and took out 3 of the crayons. How many crayons were left in the box Esme opened?



Step 2: 8 + 3 = 11 crayons left in the box

Solution: There were 11 crayons left in the box.

What did the student do wrong? Why do you think the student made this error?

The student incorrectly added 8 crayons to 3 crayons instead of subtracting.

Solve the problem correctly. Explain your thinkina.

Step 1: $64 \div 8 = 8$ crayons in each box

Step 2: 8 - 3 = 5 crayons left in the box

Solution: There were 5 crayons left in the box.

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Mr. James drinks 21 cups of coffee each week (7 days). He drinks the same number of cups of coffee a day. On Monday, he was feeling a little sleepy, so he drank 2 extra cups of coffee. How many cups of coffee did he have on Monday?



Mr. James had 23 cups of coffee on

Monday.

What did the student do wrong? Why do you think the student made this error?

Solve the problem correctly. Explain your thinking.

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Answer Key

Name:

Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Mr. James drinks 21 cups of coffee each week (7 days). He drinks the same number of cups of coffee a day. On Monday, he was feeling a little sleepy, so he drank 2 extra cups of coffee. How many cups of coffee did he have on Monday?



Mr. James had 23 cups of coffee on

Monday.

What did the student do wrong? Why do you think the student made this error?

The student skipped the first step and did not divide the total cups of coffee drank in a week by the number of days in a week. Solve the problem correctly. Explain your thinking.

Step 1: $21 \div 7 = 3$ cups of coffee

Step 2: 3 + 2 = 5 cups of coffee in all

Solution: Mr. James had 5 cups of coffee on Monday.

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Name: Date: Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem. Leo wants to buy a video game Step 1: 250 - 201 = 49 system that costs \$250. He has Student Work already saved \$201. He makes Step 2: 49 – 7 = 42 \$7 an hour pet sitting for his neighbor. How many hours will he Solution: Leo will need to work 42 more hours. need to work in order to save the rest of the money? Solve the problem correctly. Explain your What did the student do wrong? Why do you think the student made this error? thinking.

Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Leo wants to buy a video game system that costs \$250. He has already saved \$201. He makes \$7 an hour pet sitting for his neighbor. How many hours will he need to work in order to save the rest of the money?

Step 1: 250 - 201 = 49 **Udent Work**

Solution: Leo will need to work 42 more hours.

What did the student do wrong? Why do you think the student made this error?

The student subtracted on Step 2 instead of dividing.

Solve the problem correctly. Explain your thinkina.

Step 1: 250 - 201 = 49 dollars that he still needs

Step 2: 49 dollars ÷ 7 dollars per hour = 7 hours left to work

Solution: Leo will need to work 7 more hours.

Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Jetta is baking dog biscuits for the local animal shelter. She makes 3 batches of biscuits. Each batch contains 8 biscuits. She lets her dog Nero eat 2 biscuits. How many biscuits does she have left?





What did the student do wrong? Why do you think the student made this error?

Solve the problem correctly. Explain your thinking.

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Answer Key

9

Jennifer Findley

Name:

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Jetta is baking dog biscuits for the local animal shelter. She makes 3 batches of biscuits. Each batch contains 8 biscuits. She lets her dog Nero eat 2 biscuits. How many biscuits does she have left?

Solution: 3 - 2 = 6Solution: 3

Solution: Jetta has 6 dog biscuits left.

What did the student do wrong? Why do you think the student made this error?

The student did not multiply to find the total number of dog biscuits that Jetta made before subtracting. Solve the problem correctly. Explain your thinking.

- Step 1: $3 \times 8 = 24$ dog biscuits
- Step 2: 24 2 = 22 dog biscuits

Solution: Jetta has 22 dog biscuits left.

Name:

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Ira is making friendship bracelets for his 3 best friends. He wants each bracelet to have 6 beads on it. He has 9 beads in his kit. How many more beads does he need?



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Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Ira is making friendship bracelets for his 3 best friends. He wants each bracelet to have 6 beads on it. He has 9 beads in his kit. How many more beads does he need?



- Step 1: $3 \times 6 = 18$ beads needed for the bracelets
- Step 2: 18 + 9 = 27 beads in all

Solution: Ira has 27 beads in all.

What did the student do wrong? Why do you think the student made this error?

The student tried to find the total number of beads that Ira had, but the problem was asking for how many more beads he needed.. Solve the problem correctly. Explain your thinking.

Step 1: $3 \times 6 = 18$ beads needed for the bracelets

Step 2: 18 beads - 9 beads = 9 beads that he still needs

Solution: Ira still needs 9 beads.

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LEVEL 2 ERROR ANALYSIS MATH TASKS

In this level, there are six error analysis math tasks that involve all four operations (requiring multi-digit multiplication and division). These are ideal for mid to end of 4th grade or 5th grade students.

Name: _

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Alessio's recipe for berry jam calls for 12 ounces of blueberries and 24 ounces of strawberries per batch. He decides to make 7 batches of the jam to give to friends. How many ounces of berries will he need?



Alessio will need 36 ounces of berries.

What did the student do wrong? Why do you think the student made this error?

Solve the problem correctly. Explain your thinking.

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Answer Key

11

Jennifer Findley

Name:

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Alessio's recipe for berry jam calls for 12 ounces of blueberries and 24 ounces of strawberries per batch. He decides to make 7 batches of the jam to give to friends. How many ounces of berries will he need?



Alessio will need 36 ounces of berries.

What did the student do wrong? Why do you think the student made this error?

The student skipped the step requiring Alessio to multiply the berries needed for one batch by seven. Solve the problem correctly. Explain your thinking.

Step 1: 12 + 24 = 36 ounces needed for one batch

Step 2: $7 \times 36 = 252$ ounces of berries needed for 7 batches

Solution: Alessio will need 252 ounces of berries to make 7 batches.

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Astrid and Maci are collecting seashells at the beach. Astrid collects 12 shells. Maci collects 3 times as many shells as Astrid. Maci throws 8 of her shells back into the ocean because they are broken. How many shells does Maci have left?

Step 1: 3 + 12 = 15 shells that Maci collected tudent Work Step 2: 15 - 8 = 7 shells left Solution: Maci has 7 shells left. What did the student do wrong? Why Solve the problem correctly. Explain your do you think the student made this error? thinking.

Date:

12

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Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Astrid and Maci are collecting seashells at the beach. Astrid collects 12 shells. Maci collects 3 times as many shells as Astrid. Maci throws 8 of her shells back into the ocean because they are broken. How many shells does Maci have left?

Step 1: 3 + 12 = 15 shells that Maci collected

tudent Work Step 2: 15 - 8 = 7 shells left

Solution: Maci has 7 shells left.

What did the student do wrong? Why do you think the student made this error?

The student incorrectly determined the amount of shells that Maci collected because he or she added instead of multiplying.

Solve the problem correctly. Explain your thinkina. Step 1: $3 \times 12 = 36$ shells that Maci collected

Step 2: 36 - 8 = 28 shells left

Solution: Maci has 28 shells left.

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13

1 1

x 2

1,556

778

Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

356

778

+ 422

A group of teachers is making pancakes for a fundraiser. They make 356 pancakes with blueberries and 422 pancakes with chocolate chips. Each plate gets 2 pancakes. How many plates will they need?

What did the student do wrong? Why do you think the student made this error?

Student Work

The student multiplied instead of dividing for Step 1. Solve the problem correctly. Explain your thinking.

The teachers will need

Step 1: 356 + 422 = 778

1,556 plates.

Step 2: 778 \div 2 = 389 plates needed

Solution: The teachers will need 389 plates.

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Name: Date: Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem. The Fake Flower Factory produces 9,475 fake flowers every day. The 9,475 Student Work

flowers get divided evenly into 5 giant bins. A worker takes 42 flowers out of the first bin to give his mother. How many flowers are left in that bin?



There are 9,433 flowers left in that bin.

What did the student do wrong? Why do you think the student made this error? Solve the problem correctly. Explain your thinking.

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Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

The Fake Flower Factory produces 9,475 fake flowers every day. The flowers get divided evenly into 5 giant bins. A worker takes 42 flowers out of the first bin to give his mother. How many flowers are left in that bin?



There are 9,433 flowers left in that bin.

What did the student do wrong? Why do you think the student made this error?

Student Work

The student missed the step where the flowers were divided into bins before the 42 flowers were taken out. Solve the problem correctly. Explain your thinking.

Step 1: $9,475 \div 5 = 1,895$ flowers in each bin

Step 2: 1,895 - 42 = 1,853

Solution: There are 1,853 flowers left in that bin.

14

Jennifer Findley

Date:

Name:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Dahlia is helping sort the items in her school's recycling bin. There are 528 items to be recycled. She has to remove 212 items because they are not recyclable. She takes what is left and sorts them equally into 4 different bins. How many items go into each bin?



15

Jennifer Findley

Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Dahlia is helping sort the items in her school's recycling bin. There are 528 items to be recycled. She has to remove 212 items because they are not recyclable. She takes what is left and sorts them equally into 4 different bins. How many items go into each bin?

Student Work

Step 1: 528 + 212 = 740 items

Step 2: 740 \div 4 = 185 items

Solution: There are 185 items in each bin.

What did the student do wrong? Why do you think the student made this error?

The student added the items that needed to be removed instead of subtracting them. Solve the problem correctly. Explain your thinking.

Step 1: 528 - 212 = 316 items

Step 2: $316 \div 4 = 79$ items

Solution: There are 79 items in each bin.

15

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Name:

16

Jennifer Findley

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Sal wants to start a lemonade stand. He will need 18 lemons to make enough lemonade. Lemons cost 33 cents each. He finds 25 cents under a couch cushion. How many more cents will he need to buy the lemons?



Answer Key

Date:

Directions: Read the word problem. Analyze the student's work. Identify the error, and correctly solve the problem.

Sal wants to start a lemonade stand. He will need 18 lemons to make enough lemonade. Lemons cost 33 cents each. He finds 25 cents under a couch cushion. How many more cents will he need to buy the lemons?

Step 1: 18 + 33 = 51 cents Student Work

Step 2: 51 - 25 cents = 26 cents

Solution: Sal will need 26 more cents to buy the lemons.

What did the student do wrong? Why do you think the student made this error?

The student added the 18 lemons to 33 cents instead of multiplying to determine the cost for all of the lemons.

Solve the problem correctly. Explain your thinkina.

Step 1: $18 \times 33 = 594$ cents

Step 2: 594 - 26 cents

Solution: Sal will need 568 more cents to buy the lemons.

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