Problems

## Level



Problem: $7 x=49$


Problem: $x+13=27$


Problem: James and Melissa have a reading assignment to complete. Melissa has read 75 pages. Together they have read a total of 200 pages. How many pages did James read?


Problem: Jake's class is selling boxes of candy for a fundraiser. Their goal is to raise 500 dollars. If they make $\$ 2$ for each box of candy they sell, how many boxes do they need to sell to reach their goal?


Problem: Jimmy loves christmas lights! He knows he has 550 total light bulbs. He has 5 strands of lights with the same number of bulbs on each strand. How many lights are on each strand that Jimmy has?


Problem: Mark bought three notebooks. In total he spent $\$ 18$. How much did he spend on each notebook?


Problem: Alicia wants to buy a new scooter for $\$ 30$. She knows she can earn $\$ 5$ each time she mows a neighbor's yard. How many yards will she have to mow to afford the scooter?


Problem: Abdul and Maria are planning a surprise party for their friend. Together they have $\$ 12$ to spend on balloons. If they buy 4 packages of balloons and spend all their money, how much does a package of balloons cost?


Problem: Izzy collects marbles. She currently has 12. Her older sister, Adela, tells her that if they combined their collections, they would have 37 marbles total. How many marbles does Adela have?


Problem: Landon and Chantel are buying supplies for school. Landon spent $\$ 3$ less than Chantel. Chantel spent $\$ 12$. How much did Landon spend on school supplies?


Problem: Christina has to finish a book before her class tomorrow. She has 100 pages left. If Christina knows that she can read twenty pages in a half an hour, how long (in hours) will it take her to finish her reading?


Problem: Mrs. Dunn's class decides that they want to buy her an end of the year gift. There are 24 students in the class. They want to buy Mrs. Dunn a picture frame that costs $\$ 12$, how much will each student contribute to split the cost evenly?

Variable:
$\square=$ $\qquad$

Final Answer:

Problem: Felicity has 30 minutes before her bus will come to pick her up. If it takes 9 nine minutes to eat breakfast, how much more time does she have to get ready for school?


Problem: Ray has to go to soccer practice in an hour. He wants to watch some of his favorite cartoons before leaving. If each episode is twelve minutes, how many episodes can he watch before he needs to leave?


Problem: Sean's class is going on a field trip with a small participation fee.
There are 10 students in his class, who all paid the same amount. All together, they paid $\$ 25.00$. How much did Sean have to pay?


Problem: Yolanda is in charge of gathering s'mores supplies for a family camping trip. There are 5 people in Yolanda's family and the package has 15 segments of chocolate. How many segments of chocolate does each person get to make s'mores?

Variable:
$\square=$ $\qquad$

Final Answer:

Problem: Hernando can't remember how much money he had in his wallet before lunch. He knows he spent $\$ 8$ on lunch at Chipotle, and he has $\$ 13$ left in his wallet now. How much money did he have before lunch?


Problem: Jason had 131 dollars to spend on 6 books. After buying the books he had 11 dollars. Each book costs the same amount. How much did each book cost?


## Level



Problem: Thu and Cleo are driving 520 miles together. If Thu drives 60 miles more than Cleo, how far did each of them drive?


Problem: Linnea is planning on cooking dinner with three of her friends. Linnea's mom agrees to contribute $\$ 12$ towards the cost of ingredients, and Linnea and each of her friends agree to split the remaining cost equally. If the ingredients cost $\$ 24$, how much will Linnea end up spending?


Problem: $75=8 x+11$


Problem: You ride a taxi for 17 minutes, and you know that they charge a base fee (an amount charged before any minutes have gone by) and \$2 per minute. After the trip, $\$ 40$ dollars total is charged. How much was the base fee?


Problem: The sum of two numbers is 12 . One number is 4 more than the other number. What is the value of the larger number?


Problem: $23=5 x-7$


Problem: The school is putting in a new row of lockers! You have 100 feet of space, and each locker is $11 / 2$ feet wide. There needs to be 5 feet of extra space at each end of the row. How many lockers can you put in?


Problem: You are at a school assembly and getting bored. You know the next class is supposed to start in 40 minutes, and the teachers usually allow 10 minutes after assembly for you to get back to class. You estimate each speaker is about 6 minutes. If there are only speakers remaining in assembly, how many more speakers are there?


Problem: $4 x+7=19$


Problem: I am some number. Multiply me by 6 , and then add 4 and you get 10. What number am I?


Problem: Last week Javier had twice as many stickers as Daniel. Then Daniel received 12 stickers for his birthday. Together they now have 90 stickers. How many stickers did Daniel have last week?


Problem: $131=6 x+11$


Problem: Sunny Hill Farms and Babbling Brooks Farms both raise hens. Sunny Hill Farms has 35 hens. Babbling Brooks Farms has 15 hens. If together the farms have 500 eggs at the end of the week, and each hen laid the same number of eggs, how many eggs did each hen lay last week?


Problem: Felix wants to buy a new pair of shoes that cost $\$ 30$. He has $\$ 15$ now, and knows he can earn $\$ 5$ a week helping his grandma with yard work. In how many weeks can Felix afford the shoes?


Problem: $520=x+(x+60)$


Problem: Jason had 131 dollars to spend. After buying 5 books he had 11 dollars left. Each book cost the same amount. How much did each book cost?


Problem: $36=12+4 x$


Problem: $50=10+4 x$


Problem: $12 \times 3+x=43$


Problem: $12=x+(x-4)$

Final Answer:

Problem: $6 x+4=10$


## Level



Problem: Alicia bought 3 notebooks and 2 binders, and her sister agreed to pay for the notebooks. Unfortunately, Alicia can't remember the cost of the notebooks! She does remember that each binder cost $\$ 1$ more than each notebook and that she spent $\$ 10$ total. How much does Alicia's sister need to pay Alicia?


Problem: Philippe and Finn go to see a movie. Each buys a ticket for \$7 and a slushie, spending $\$ 18$ together. How much does one slushie cost?


Problem: $3(x+2)+4 x=27$


Problem: $4 x+2 x=24$


Problem: Jordan goes to the grocery store and buys one bag of chocolate, one bag of caramel, and one bag of lollipops. A bag of chocolate costs two dollars more than three times as much as a bag of caramel, and a bag of lollipops costs as much as buying a bag of caramel and a bag of chocolate. If Jordan spends 20 dollars for the three bags, how much does a bag of chocolate cost?

Variable:
$\square$
$\qquad$

Problem: Kim is three years older than her sister Jess and half as old as her cousin Lexi. If they add their ages together, they get 37 . How old is Jess?


Problem: Jeremiah had a busy Saturday morning! Starting at 9:00am, he cleaned his bedroom for a while. Then he helped his mom clean the garage for four times as long as he had spent cleaning his room. Finally he cooked breakfast with his sister for ten minutes fewer than the time he had spent cleaning his room, until 9:56 am. How many minutes did Jeremiah spend cleaning his room this morning?

## Variable: <br> $\square$ <br> $\qquad$

Problem: Izumi is running the mile (4 laps) at a track meet. She knows that she can run her first lap in 75 seconds. Izumi also knows that her second and third laps are the same speed, while her final lap is normally 9 seconds faster than her third lap. If she wants to finish in 6 minutes, how fast should her second lap be? (Note: there are 60 seconds in 1 minute)


## Problem: 5(x+5)-2(2x+4)=18



Problem: Jamal has three reading assignments to complete. In total he has to read 70 pages. Assignment 2 is twice as long as assignment 1 , and assignment 3 is four times long as assignment 1 . How many pages is his shortest assignment?


Problem: Malia and Megan ordered 3 pizzas and each pizza had 8 slices.
Their friend Nilver ate 4 slices of pizza, their friend Shayna ate twice as many pieces as Nilver. Malia and Megan ate all of the remaining slices. How many slices did Malia and Megan eat?

Variable:
$\square=$ $\qquad$

Problem: $2(2 x+5+x)+10-x=60$


Problem: Shailee and Sofia are on a road trip to see their grandparents. They drive for a while before stopping for lunch. After that, they drive again for 3 hours before getting gas. Before reaching their grandparents house, they drive 1 hour less than twice as long as they drove before the first stop. In total, they drove 14 hours on their trip. How long did they drive before the first stop, for lunch?

## Variable:

$\square=$ $\qquad$

Final Answer:

Problem: Marcos picked up three books from the library. The Uglies is twice as long as A Wrinkle In Time, and A Wrinkle In Time has forty pages more pages than The BFG. Altogether, the three books have 960 pages. How many pages long is The BFG?


Problem: $3(x+8)+2(x+1)=36$


## Level



Problem: Frankie and Lana are both selling candy for a school fundraiser. Frankie sells three boxes of chocolate in addition to $\$ 12$ worth of hard candies. Lana sells seven boxes of chocolate and brags that she has earned $\$ 4$ more than Frankie. How much does each box of chocolates cost?


Problem: Monica and Bridget bought the same binders for school, and after filling them with school supplies, they weigh the same amount! Monica's binder contains a pencil pouch that weighs 2 pounds and 3 notebooks. Bridget's binder contains a stapler that weighs 1 pound, a pack of crayons that weighs 2 pounds, and 2 notebooks. How much does 1 notebook weigh?

## Variable: <br> $\square$ <br> $\qquad$

Problem: $3 x+1=x+9$


Problem: Jimmy always goes on runs that are the same distance. Last week he went on a run where he ran his favorite trail 2 times and then ran 3 miles to the park. Today, he ran his favorite trail 3 times and then ran 1 more mile. How many miles is his favorite trail?

Variable:
$\square=$ $\qquad$

Final Answer:

Problem: Samantha and Carlos wore braces for the same number of years. Samantha can't remember how many years her doctor said she would need braces for, but she knows she had braces for 3 years longer than the doctor expected. Carlos had braces for twice as long as Samantha was supposed to. How long was Samantha supposed to have braces for?


## Problem: $2 \mathrm{t}+15=4 \mathrm{t}+5$



Problem: In middle school, Frank and AJ went to the same number of dances. Frank went to 2 dances in 6th grade, and 3 dances in 7 th grade. AJ didn't go to any dances 6th grade, and went to to 1 dance in 7 th grade. In 8th grade AJ went to three times as many dances as Frank. How many dances did Frank go to in 8th grade?


Problem: Samantha and Elsa have the same number of photos on their phones, and all of their pictures are either selfies or pictures of their pet. Samantha's phone has 5 times as many selfies as Elsa's. Elsa's phone has 20 pictures of her dog, and Samantha's phone has 4 pictures of her cat. How many selfies does Elsa have on her phone?


Problem: $3(p+3)+1=p+24$


Problem: Every Friday, Lola has her friends over and they eat pizza rolls. Last week her friends made 3 boxes of pizza rolls and ate 5 pizza rolls that were leftover in the fridge. This week they ate 4 boxes of pizza rolls and ate 3 more rolls than they ate last week. How many pizza rolls are there in one box?


Problem: Frank has eleven siblings, and they all like to eat cheese sticks. Their dad buys the same number of cheese sticks every week. Last week, Frank ate many cheese sticks, and each of his siblings ate three cheese sticks. This week, Frank and his sister Sofia each ate one more than Frank had eaten the week before, and each of their other siblings ate two cheese sticks. How many cheese sticks did Frank eat last week?

## Variable: <br> $\square=$ <br> $\qquad$

Final Answer:

Problem: $y+3=10 y-15$


Problem: Gretchen plays the clarinet, and her teacher has a required amount of time that a practice session is supposed to last. Last week she practiced the required amount of time 6 times, and practiced for 30 extra minutes on Thursday. This week she practiced the required amount 5 times and practiced 90 minutes less this week than last week. How long does Gretchen's teacher require that a practice session last?

## Variable:

$\square=$

Final Answer:

Problem: Ron and Harry love to tell jokes. On Tuesday Ron told 3 jokes in each class period and Harry told 5 jokes in each class period. Ron also told 8 jokes during lunch, and Harry told 2 jokes during lunch. If they only told jokes during class and at lunch, and they both told the same number of jokes on Tuesday, how many class periods were there on Tuesday?


Problem: $7(x+1)=4 x+43$


