Problem: 7x=49

7x

49

7x

| x | x | x | x | x | x | x |

49

| x | x | x | x | x | x | x |

| 7 | 7 | 7 | 7 | 7 | 7 | 7 |

x

7

Final Answer: 7

Problem: x + 13 = 27

| x | 13 |

| 27 |

| x | -13 |

| 27 | -13 |

| x |

| 14 |
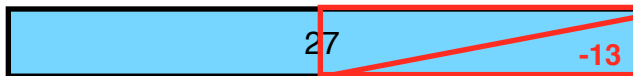
Final Answer: $x = 14$

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?

pages
Melissa read

| p | 75 |

| 200 |
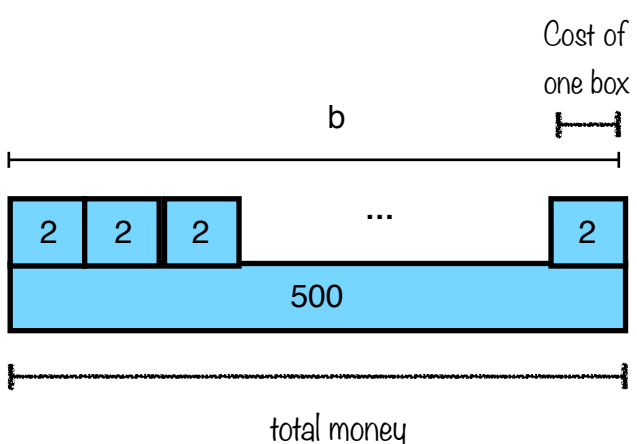
Variable:

p = pages James read

| p | 75 -75 |

| 200 -75 |

| p |

| 125 |

Final Answer: 125 pages

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?

Variable:

b = number of boxes

Cost of one box

b

2 | 2 | 2 | ... | 2

500

total money

From the model we can see that we now have to divide 500 by 2 in order to find the answer!

$500 \div 2 = 250$

Final Answer: 250 boxes

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

Variable:
L = number of lights on one strand

L	L	L	L	L

550

L	L	L	L	L

550

L	L	L	L	L

110	110	110	110	110

L

110

Final Answer: 110 bulbs

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

Variable:

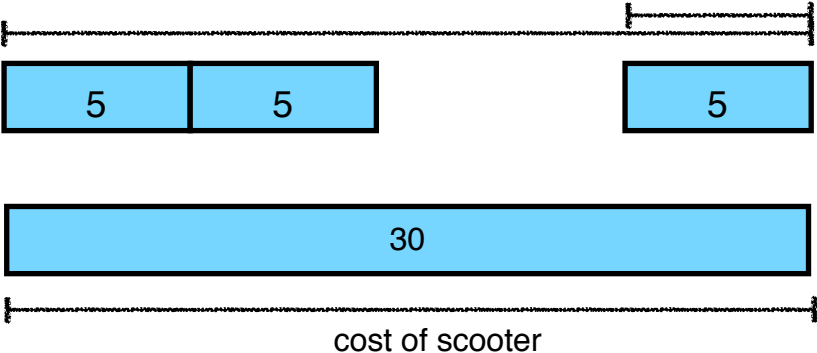n = Cost of one notebook

3n

n	n	n

18

n	n	n

18

n	n	n

6	6	6

Final Answer: 6 dollars

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?

Variable:

y = number of yards

$5 earned for each yard

y

5   5   5

30

cost of scooter

Looking at this model, we can see that we must divide 30 by 5 in order to find the answer:

$$30 \div 5 = 6$$

Let's check:
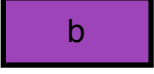$5 x 6 yards = $30

She has enough for the scooter!

Final Answer: 6 yards

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?

Variable:

b = cost of a package of balloons

| b | b | b | b |

| 12 |

| b | b | b | b |

| 12 |

| b | b | b | b |

| 3 | 3 | 3 | 3 |

| b |

| 3 |

Final Answer: $3/package

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?

Variable:

m   = number of marbles Adela has

| m | 12 |

| 37 |

| m | -12 |

| 37 | -12 |

| m |

| 25 |

Final Answer: 25 marbles

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

Variable:

s = money spent on Landon's school supplies

$3 less than Chantel

Landon | s

Chantel | 12 | -3

s

9

Final Answer: $9.00

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?

Variable:

h = number of 1/2-hour blocks

h half hour blocks

| 20 | 20 | ... | 20 |

| 100 |

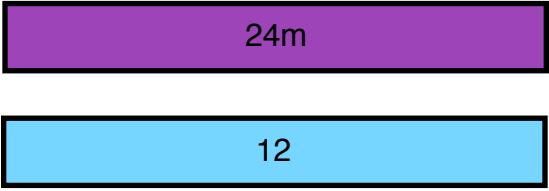Looking at the model we see we need to divide 100 by 20 to find how many half-hour blocks she needs to finish.

$$100 \div 20 = 5$$

Let's check,
5 half-hour blocks * 20 pages = 100 pages.

But we want the answer in hours, so
5 ½-hour blocks = 2.5 hours

Final Answer: 2.5 hours

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?
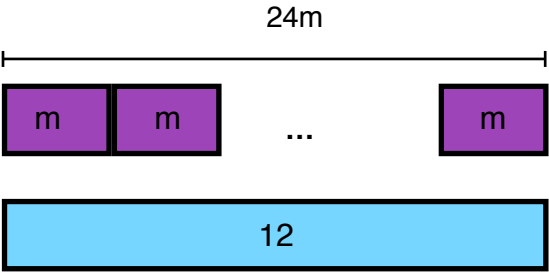
Variable:
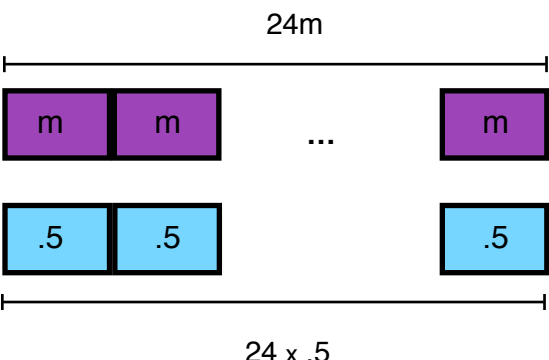
m = money each student contributes

24m

12

24m

| m | m | ... | m |

12

It's too much to draw 25 m blocks, so we can show it this way
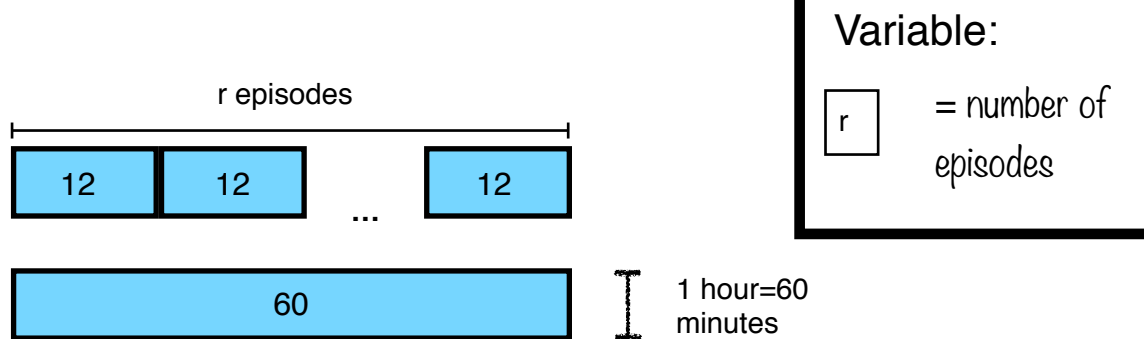
24m

| m | m | ... | m |

| .5 | .5 | | .5 |

24 x .5

$12 \div 24 = .5$

Final Answer: $0.50

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 can he watch before he needs to leave?

r episodes

| 12 | 12 | ... | 12 |

| 60 |

1 hour=60 minutes

Variable:

r = number of episodes

I can see from the model that I need to divide 60 by 12 to find the number of episodes
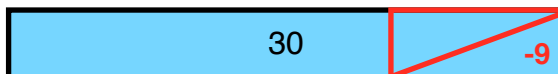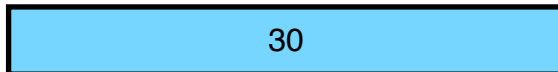
$$60 \div 12 = 5$$

Let's check:
5 episodes x 12 minutes per episode = 60 minutes of TV

Final Answer: 5 episodes

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?

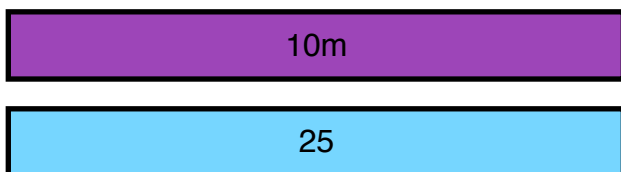Variable:

t = time to get ready

| t | 9 |

| 30 |

| t | 9　-9 |

| 30 | -9 |

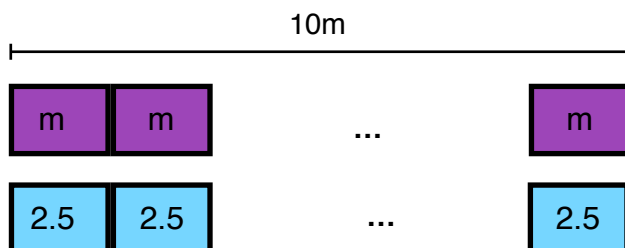| t |

| 21 |

Final Answer: 21 minutes

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?

Variable:

m = money Sean pays (each student pays)

10m

25

$25 \div 10 = 2.5$

10m

| m | m | ... | m |

| 2.5 | 2.5 | ... | 2.5 |

It's too much to draw 10 m blocks and 10 2.5 blocks, so we can show it this way.

Final Answer: $2.50

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

Variable:

| s | = number of segments each person gets |

| s | s | s | s | s |

| 15 |

| s | s | s | s | s |

| 15 |

| s | s | s | s | s |

| 3 | 3 | 3 | 3 | 3 |
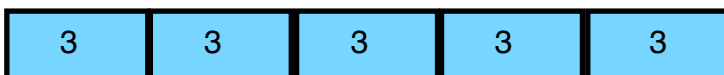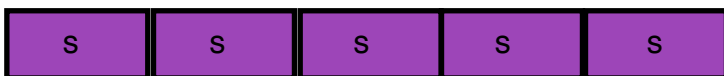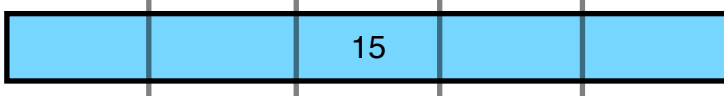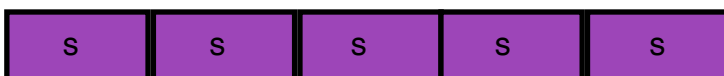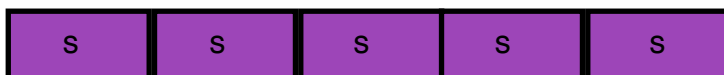
Final Answer: 3 segments

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?

Variable:

m   = money before lunch

| m | -8 |

| 13 |

+8

| m |

| 21 |

Final Answer: $21