



Answers

1. _____
2. _____
3. _____
4. _____
5. _____



Solve each problem using a tape diagram.

- 1) A store sold 50 C batteries in a day. They sold 3 as many AAA batteries as C batteries and 3 times as many AA as AAA batteries. How many batteries did they sell total?

C	50								
AAA									
AA									

- 2) An ice cream shop sold 37 waffle cones. They sold 8 times as many sugar cones as waffle cones and 3 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	37								
Sugar									
Wafer									

- 3) A school principal was looking over grades. In math 22 students scored a C. 3 times as many students scored a B. And 6 times as many students scored an A as scored a B. How many students scored an A, B or C?

C	22								
B									
A									

- 4) On week 1 a football player jogged for 29 minutes. On week 2 he jogged for 2 times as long. On week 3 he jogged for 5 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?

Week 1	29								
Week 2									
Week 3									

- 5) An ice cream shop sold 41 waffle cones. They sold 2 times as many sugar cones as waffle cones and 2 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	41								
Sugar									
Wafer									

Answers

1. **650**
2. **1221**
3. **484**
4. **377**
5. **287**



Solve each problem using a tape diagram.

Answers

- 1) On week 1 a football player jogged for 46 minutes. On week 2 he jogged for 7 times as long. On week 3 he jogged for 9 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?
- 2) In one day a restaurant used 11 knives. They also used 2 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?
- 3) Chef Cody buys 35 carrots. He buys 2 times as many potatoes as carrots and 3 times as many tomatoes as potatoes. How many vegetables did he buy all together?
- 4) An ice cream shop sold 18 waffle cones. They sold 4 times as many sugar cones as waffle cones and 2 times as many wafer cones as sugar cones. How many cones did they sell total?
- 5) A school principal was looking over grades. In math 12 students scored a C. 3 times as many students scored a B. And 3 times as many students scored an A as scored a B. How many students scored an A, B or C?

1. _____
2. _____
3. _____
4. _____
5. _____

Solve each problem using a tape diagram.

- 1) On week 1 a football player jogged for 46 minutes. On week 2 he jogged for 7 times as long. On week 3 he jogged for 9 times as long as he jogged on week 2. How many minutes did he jog across all 3 weeks?

Week 1 46

Week 2 

Week 3

- 2) In one day a restaurant used 11 knives. They also used 2 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?

knives	11
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forks		
-------	--	--

spoons				
--------	--	--	--	--

- 3) Chef Cody buys 35 carrots. He buys 2 times as many potatoes as carrots and 3 times as many tomatoes as potatoes. How many vegetables did he buy all together?

Carrots	35
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Potatoes		
----------	--	--

Tomatoes					
----------	--	--	--	--	--

- 4) An ice cream shop sold 18 waffle cones. They sold 4 times as many sugar cones as waffle cones and 2 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	18
--------	----

Sugar				
-------	--	--	--	--

Wafer								
-------	--	--	--	--	--	--	--	--

- 5) A school principal was looking over grades. In math 12 students scored a C. 3 times as many students scored a B. And 3 times as many students scored an A as scored a B. How many students scored an A, B or C?

C 12

B			
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A								
---	--	--	--	--	--	--	--	--

Answers

1. **3266**

2. **77**

3. **315**

4. **234**

5. **156**



Solve each problem using a tape diagram.

Answers

- 1) On week 1 a football player jogged for 18 minutes. On week 2 he jogged for 3 times as long. On week 3 he jogged for 2 times as long as he jogged on week 2. How many minutes did he jog across all 3 weeks?

- 2) An ice cream shop sold 30 waffle cones. They sold 3 times as many sugar cones as waffle cones and 3 times as many wafer cones as sugar cones. How many cones did they sell total?

- 3) In one day a restaurant used 22 knives. They also used 3 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?

- 4) An ice cream shop sold 27 waffle cones. They sold 4 times as many sugar cones as waffle cones and 8 times as many wafer cones as sugar cones. How many cones did they sell total?

- 5) Chef Cody buys 29 carrots. He buys 4 times as many potatoes as carrots and 7 times as many tomatoes as potatoes. How many vegetables did he buy all together?

1. _____

2. _____

3. _____

4. _____

5. _____



Solve each problem using a tape diagram.

- 1) On week 1 a football player jogged for 18 minutes. On week 2 he jogged for 3 times as long. On week 3 he jogged for 2 times as long as he jogged on week 2. How many minutes did he jog across all 3 weeks?

Week 1	18
Week 2	
Week 3	

- 2) An ice cream shop sold 30 waffle cones. They sold 3 times as many sugar cones as waffle cones and 3 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	30
Sugar	
Wafer	

- 3) In one day a restaurant used 22 knives. They also used 3 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?

knives	22
forks	
spoons	

- 4) An ice cream shop sold 27 waffle cones. They sold 4 times as many sugar cones as waffle cones and 8 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	27
Sugar	
Wafer	

- 5) Chef Cody buys 29 carrots. He buys 4 times as many potatoes as carrots and 7 times as many tomatoes as potatoes. How many vegetables did he buy all together?

Carrots	29
Potatoes	
Tomatoes	

Answers

1. **180**
2. **390**
3. **220**
4. **999**
5. **957**



Solve each problem using a tape diagram.

- 1) An ice cream shop sold 29 waffle cones. They sold 2 times as many sugar cones as waffle cones and 3 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	29	
Sugar		
Wafer		

- 2) In one day a restaurant used 50 knives. They also used 3 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?

knives	50	
forks		
spoons		

- 3) An ice cream shop sold 28 waffle cones. They sold 3 times as many sugar cones as waffle cones and 9 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle	28	
Sugar		
Wafer		

- 4) On week 1 a football player jogged for 13 minutes. On week 2 he jogged for 4 times as long. On week 3 he jogged for 3 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?

Week 1	13	
Week 2		
Week 3		

- 5) A school principal was looking over grades. In math 40 students scored a C. 4 times as many students scored a B. And 7 times as many students scored an A as scored a B. How many students scored an A, B or C?

C	40	
B		
A		

Answers

1. **261**
2. **500**
3. **868**
4. **221**
5. **1320**



Solve each problem using a tape diagram.

Answers

- 1) On week 1 a football player jogged for 37 minutes. On week 2 he jogged for 7 times as long. On week 3 he jogged for 4 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?
- 2) A school principal was looking over grades. In math 30 students scored a C. 2 times as many students scored a B. And 2 times as many students scored an A as scored a B. How many students scored an A, B or C?
- 3) An ice cream shop sold 19 waffle cones. They sold 5 times as many sugar cones as waffle cones and 6 times as many wafer cones as sugar cones. How many cones did they sell total?
- 4) Chef Paul buys 20 carrots. He buys 5 times as many potatoes as carrots and 7 times as many tomatoes as potatoes. How many vegetables did he buy all together?
- 5) A store sold 14 C batteries in a day. They sold 2 as many AAA batteries as C batteries and 2 times as many AA as AAA batteries. How many batteries did they sell total?

1. _____
2. _____
3. _____
4. _____
5. _____

Solve each problem using a tape diagram.

Answers

- 1) On week 1 a football player jogged for 37 minutes. On week 2 he jogged for 7 times as long. On week 3 he jogged for 4 times as long as he jogged on week 2. How many minutes did he jog across all 3 weeks?

Week 1 37

Week 2

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[illegible]

- 2) A school principal was looking over grades. In math 30 students scored a C. 2 times as many students scored a B. And 2 times as many students scored an A as scored a B. How many students scored an A, B or C?

C	30
---	----

B		
---	--	--

A				
---	--	--	--	--

- 3) An ice cream shop sold 19 waffle cones. They sold 5 times as many sugar cones as waffle cones and 6 times as many wafer cones as sugar cones. How many cones did they sell total?

Waffle 19

Sugar					
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[illegible]

- 4) Chef Paul buys 20 carrots. He buys 5 times as many potatoes as carrots and 7 times as many tomatoes as potatoes. How many vegetables did he buy all together?

Carrots 20

Potatoes					
----------	--	--	--	--	--

[illegible]

- 5) A store sold 14 C batteries in a day. They sold 2 as many AAA batteries as C batteries and 2 times as many AA as AAA batteries. How many batteries did they sell total?

C	14
---	----

AAA		
-----	--	--

AA				
----	--	--	--	--

1. 1332

2. 210

3. 684

4. 820

5. 98



Solve each problem using a tape diagram.

Answers

- 1) A school principal was looking over grades. In math 29 students scored a C. 2 times as many students scored a B. And 3 times as many students scored an A as scored a B. How many students scored an A, B or C?

- 2) On week 1 a football player jogged for 22 minutes. On week 2 he jogged for 3 times as long. On week 3 he jogged for 2 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?

- 3) In one day a restaurant used 43 knives. They also used 2 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?

- 4) On week 1 a football player jogged for 33 minutes. On week 2 he jogged for 6 times as long. On week 3 he jogged for 8 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?

- 5) A school principal was looking over grades. In math 41 students scored a C. 4 times as many students scored a B. And 9 times as many students scored an A as scored a B. How many students scored an A, B or C?

1. _____
2. _____
3. _____
4. _____
5. _____



Solve each problem using a tape diagram.

- 1) A school principal was looking over grades. In math 29 students scored a C. 2 times as many students scored a B. And 3 times as many students scored an A as scored a B. How many students scored an A, B or C?

C	29
B	
A	

- 2) On week 1 a football player jogged for 22 minutes. On week 2 he jogged for 3 times as long. On week 3 he jogged for 2 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?

Week 1	22
Week 2	
Week 3	

- 3) In one day a restaurant used 43 knives. They also used 2 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?

knives	43
forks	
spoons	

- 4) On week 1 a football player jogged for 33 minutes. On week 2 he jogged for 6 times as long. On week 3 he jogged for 8 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?

Week 1	33
Week 2	
Week 3	

- 5) A school principal was looking over grades. In math 41 students scored a C. 4 times as many students scored a B. And 9 times as many students scored an A as scored a B. How many students scored an A, B or C?

C	41
B	
A	

Answers

1. **261**
2. **220**
3. **387**
4. **1815**
5. **1681**

Solve each problem using a tape diagram.

- 1) A school principal was looking over grades. In math 34 students scored a C. 4 times as many students scored a B. And 2 times as many students scored an A as scored a B. How many students scored an A, B or C?

C	34						
B							
A							

- 2) On week 1 a football player jogged for 24 minutes. On week 2 he jogged for 4 times as long. On week 3 he jogged for 8 times as long as he jogged on week 2. How many minutes did he jog across all 3 weeks?

[illegible]

- 3) A store sold 44 C batteries in a day. They sold 8 as many AAA batteries as C batteries and 8 times as many AA as AAA batteries. How many batteries did they sell total?

The diagram illustrates a hierarchical tree structure with three levels of nodes. The top level is labeled 'C' and contains 4 nodes. The second level is labeled 'AAA' and contains 8 nodes. The third level is labeled 'AA' and contains 16 nodes. The nodes are represented by rectangles, and the connections between them form a tree structure.

- 4) In one day a restaurant used 39 knives. They also used 4 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?

[illegible]

- 5) In one day a restaurant used 16 knives. They also used 2 as many forks as they used knives. And 9 times as many spoons as forks. How many utensils do they use in a day?

knives	16
forks	2
spoons	1

Answers

1. **442**

2. **888**

3. **3212**

4. **663**

5. **336**



Answers

- 1) A school principal was looking over grades. In math 40 students scored a C. 9 times as many students scored a B. And 9 times as many students scored an A as scored a B. How many students scored an A, B or C?
- 2) Chef Edward buys 42 carrots. He buys 2 times as many potatoes as carrots and 4 times as many tomatoes as potatoes. How many vegetables did he buy all together?
- 3) A store sold 26 C batteries in a day. They sold 2 as many AAA batteries as C batteries and 3 times as many AA as AAA batteries. How many batteries did they sell total?
- 4) An ice cream shop sold 19 waffle cones. They sold 2 times as many sugar cones as waffle cones and 2 times as many wafer cones as sugar cones. How many cones did they sell total?
- 5) An ice cream shop sold 27 waffle cones. They sold 6 times as many sugar cones as waffle cones and 4 times as many wafer cones as sugar cones. How many cones did they sell total?

1. _____
2. _____
3. _____
4. _____
5. _____

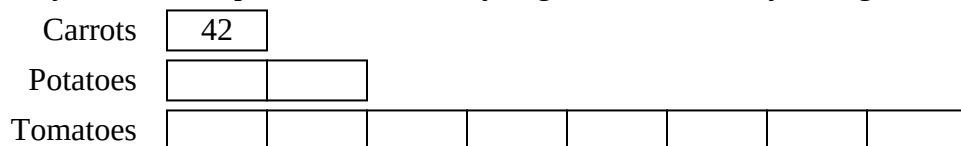


Solve each problem using a tape diagram.

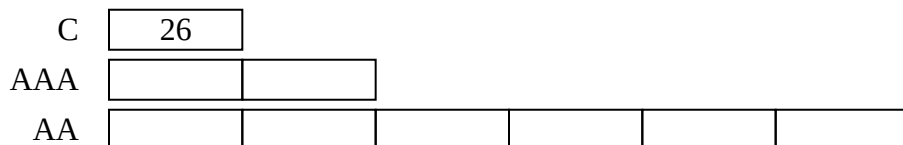
- 1) A school principal was looking over grades. In math 40 students scored a C. 9 times as many students scored a B. And 9 times as many students scored an A as scored a B. How many students scored an A, B or C?



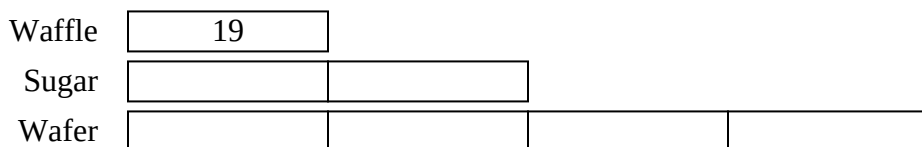
- 2) Chef Edward buys 42 carrots. He buys 2 times as many potatoes as carrots and 4 times as many tomatoes as potatoes. How many vegetables did he buy all together?



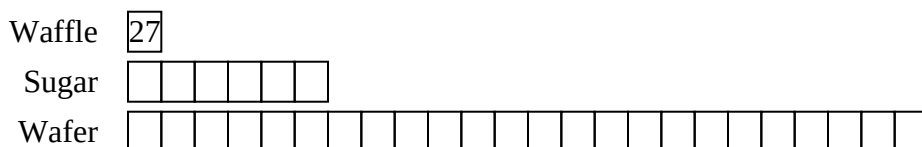
- 3) A store sold 26 C batteries in a day. They sold 2 as many AAA batteries as C batteries and 3 times as many AA as AAA batteries. How many batteries did they sell total?



- 4) An ice cream shop sold 19 waffle cones. They sold 2 times as many sugar cones as waffle cones and 2 times as many wafer cones as sugar cones. How many cones did they sell total?



- 5) An ice cream shop sold 27 waffle cones. They sold 6 times as many sugar cones as waffle cones and 4 times as many wafer cones as sugar cones. How many cones did they sell total?

**Answers**1. **3640**2. **462**3. **234**4. **133**5. **837**



Solve each problem using a tape diagram.

Answers

- 1) A store sold 47 C batteries in a day. They sold 6 as many AAA batteries as C batteries and 5 times as many AA as AAA batteries. How many batteries did they sell total?
- 2) Chef Luke buys 28 carrots. He buys 3 times as many potatoes as carrots and 3 times as many tomatoes as potatoes. How many vegetables did he buy all together?
- 3) In one day a restaurant used 24 knives. They also used 6 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?
- 4) In one day a restaurant used 18 knives. They also used 4 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?
- 5) Chef George buys 25 carrots. He buys 7 times as many potatoes as carrots and 6 times as many tomatoes as potatoes. How many vegetables did he buy all together?

1. _____
2. _____
3. _____
4. _____
5. _____

Solve each problem using a tape diagram.

Answers

- 1) A store sold 47 C batteries in a day. They sold 6 as many AAA batteries as C batteries and 5 times as many AA as AAA batteries. How many batteries did they sell total?

Diagram illustrating the structure of the array `C` (size 47) and its partitioning into blocks of size 9 and 2, and further into blocks of size 2 and 1.

- `C` (size 47) is partitioned into 5 blocks of size 9, with the last block containing 7 elements.
- Each 9-element block is further partitioned into 5 blocks of size 2, with the last block containing 1 element.
- The final structure shows 25 blocks of size 2 or 1.

1. 1739

2. **364**

3. **456**

4. **306**

5. 1250

- 2) Chef Luke buys 28 carrots. He buys 3 times as many potatoes as carrots and 3 times as many tomatoes as potatoes. How many vegetables did he buy all together?

Carrots	28								
Potatoes									
Tomatoes									

- 3) In one day a restaurant used 24 knives. They also used 6 as many forks as they used knives. And 2 times as many spoons as forks. How many utensils do they use in a day?

[illegible]

- 4) In one day a restaurant used 18 knives. They also used 4 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?

[illegible]

- 5) Chef George buys 25 carrots. He buys 7 times as many potatoes as carrots and 6 times as many tomatoes as potatoes. How many vegetables did he buy all together?

Vegetable	Count
Carrots	25
Potatoes	10
Tomatoes	50



Solve each problem using a tape diagram.

Answers

- 1) On week 1 a football player jogged for 38 minutes. On week 2 he jogged for 6 times as long. On week 3 he jogged for 4 times as long as he jogged on week 2. How many minute did he jog across all 3 weeks?
- 2) A store sold 11 C batteries in a day. They sold 5 as many AAA batteries as C batteries and 9 times as many AA as AAA batteries. How many batteries did they sell total?
- 3) Chef Victor buys 24 carrots. He buys 3 times as many potatoes as carrots and 2 times as many tomatoes as potatoes. How many vegetables did he buy all together?
- 4) A school principal was looking over grades. In math 26 students scored a C. 3 times as many students scored a B. And 3 times as many students scored an A as scored a B. How many students scored an A, B or C?
- 5) In one day a restaurant used 47 knives. They also used 4 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?

1. _____
2. _____
3. _____
4. _____
5. _____

Solve each problem using a tape diagram.

Answers

- 1) On week 1 a football player jogged for 38 minutes. On week 2 he jogged for 6 times as long. On week 3 he jogged for 4 times as long as he jogged on week 2. How many minutes did he jog across all 3 weeks?

Week 1

38

Week 2

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[illegible]

- 2) A store sold 11 C batteries in a day. They sold 5 as many AAA batteries as C batteries and 9 times as many AA as AAA batteries. How many batteries did they sell total?

C 11

AAA					
-----	--	--	--	--	--

[illegible]

- 3) Chef Victor buys 24 carrots. He buys 3 times as many potatoes as carrots and 2 times as many tomatoes as potatoes. How many vegetables did he buy all together?

Carrots	24
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Potatoes			
----------	--	--	--

Tomatoes						
----------	--	--	--	--	--	--

- 4) A school principal was looking over grades. In math 26 students scored a C. 3 times as many students scored a B. And 3 times as many students scored an A as scored a B. How many students scored an A, B or C?

C 26

B			
---	--	--	--

A								
---	--	--	--	--	--	--	--	--

- 5) In one day a restaurant used 47 knives. They also used 4 as many forks as they used knives. And 3 times as many spoons as forks. How many utensils do they use in a day?

knives

47

forks				
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[illegible]

1. 1178

2. 561

3. **240**

4. **338**

5. 799