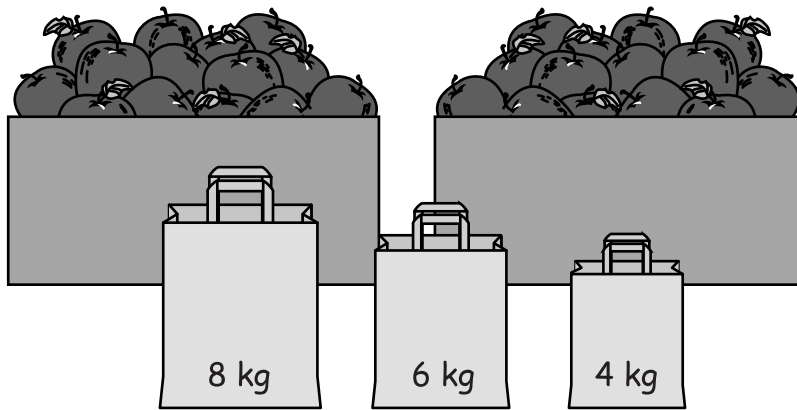


FSA Exemplars

Grade 4 Numeracy

FSA 2009 Grade 4 Numeracy Question 1

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

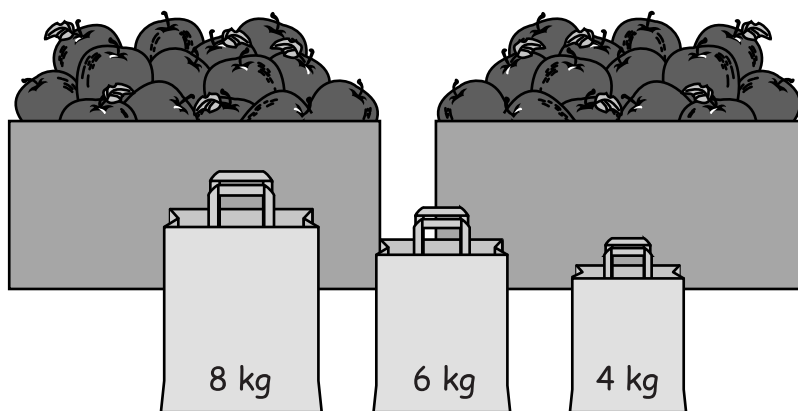
How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

(4 marks)

Score

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

SCORING RATIONALES

- Concept:** 3A9—Given the constraints of number, students add to a target number.
4A3—Solve problems that involve addition of more than 2 numbers.
- Strategies:** 4B2 (AI#1)—Students could use a chart to solve the problem.
4B4 (AI#7)—Students could use numerous methods other than a chart to solve problem.
- Accuracy:**
- as many of the possible solutions as possible.
 - has not ignored any conditions.

Representation

Communication: Marker should easily be able to follow the student's thinking.

Solution 1:

8 kg	6 kg	4 kg
3	–	–
2	–	2
1	2	1
1	–	4
–	4	–
–	2	3
–	–	6

There are seven different ways.

Solution 2:

$$8 + 8 + 8$$

$$8 + 8 + 4 + 4$$

$$8 + 6 + 6 + 4$$

$$8 + 4 + 4 + 4 + 4$$

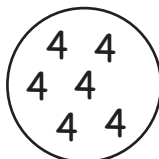
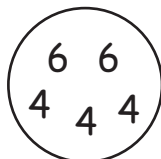
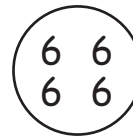
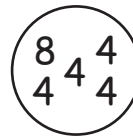
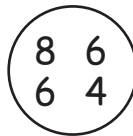
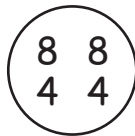
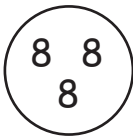
$$6 + 6 + 6 + 6$$

$$6 + 6 + 4 + 4 + 4$$

$$4 + 4 + 4 + 4 + 4 + 4$$

There are seven different ways.

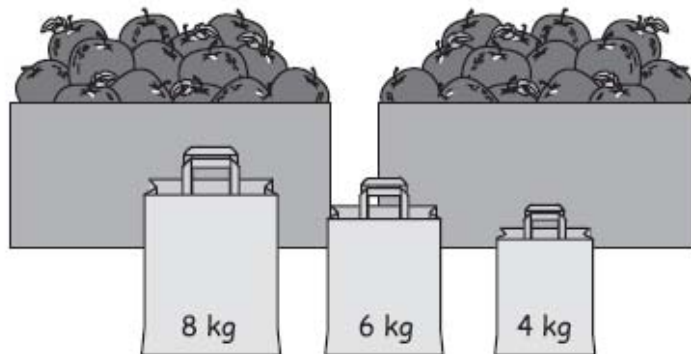
Solution 3:



There are seven different ways.

Grade 4 Numeracy Question 1 – Exemplar # 1

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

(4 marks)

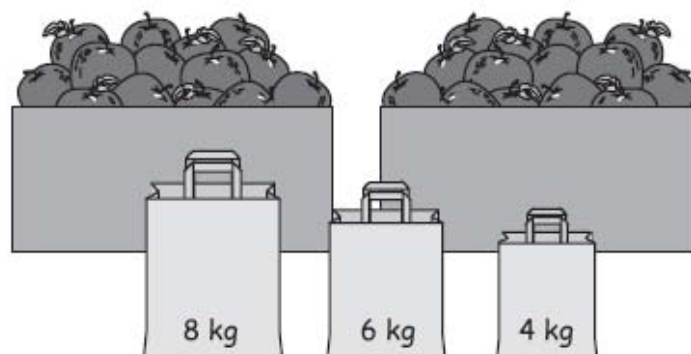
#	8 kg	6 kg	4 kg
1	3	0	0
2	2	0	2
3	1	2	1
4	0	4	0
5	0	2	3
6	0	0	6
7	1	0	4

24 kg of apples can be given away 7 different ways.

Score

Grade 4 Numeracy Question 1 – Exemplar # 2

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show ALL your work.

(4 marks)

1. 8 kg 6 kg 6 kg 4 kg

2. 8 kg 8 kg 4 kg 4 kg

3. 8 kg 4 kg 4 kg 4 kg 4 kg

4. 6 kg 6 kg 6 kg 6 kg

5. 4 kg 4 kg 4 kg 4 kg 4 kg 4 kg

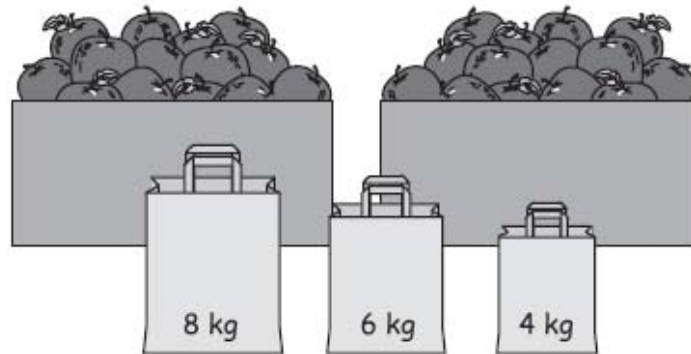
6. 8 kg 8 kg 8 kg

7. 6 kg 6 kg 4 kg 4 kg 4 kg

There are 7 different ways 24 kg of apples can be sold.

Grade 4 Numeracy Question 1 – Exemplar # 3

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

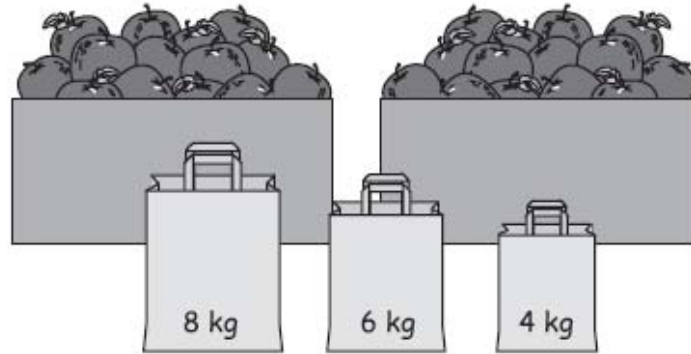
T = 24 (4 marks)

	8 kg	6 kg	4 kg	T = 24
1.	3	0	0	$24 + 0 + 0 = 24$
2.	2	2	1	$8 + 12 + 4 = 24$
3.	0	4	0	$0 + 24 + 0 = 24$
4.	0	2	3	$0 + 12 + 12 = 24$

You can have 4 different ways of apples given away.

Grade 4 Numeracy Question 1 – Exemplar # 4

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show ALL your work.

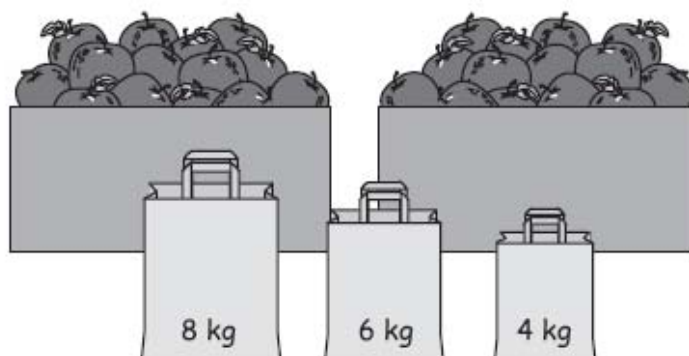
(4 marks)

1. $8 + 8 + 8 = 24$
2. $8 + 6 + 6 + 4 = 24$
3. $8 + 4 + 8 + 4 = 24$
4. $6 + 6 + 6 + 6 = 24$
5. $6 + 4 + 6 + 8 = 24$
6. $4 + 4 + 4 + 4 + 4 + 4 = 24$
7. $4 + 4 + 4 + 8 + 4 = 24$

There are 7 combinations of apples given away.

Grade 4 Numeracy Question 1 – Exemplar # 5

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

(4 marks)

$$6 \times 4 = 24$$

$$6 + 8 + 4 + 6 = 24$$

$$6 + 6 + 6 + 6 = 24$$

$$8 + 8 + 8 = 24$$

$$4 + 4 + 4 + 4 + 4 + 4 = 24$$

$$8 + 8 + 4 + 4 = 24$$

$$6 + 6 + 4 + 4 + 4 = 24$$

$$6 + 6 + 8 + 4 = 24$$

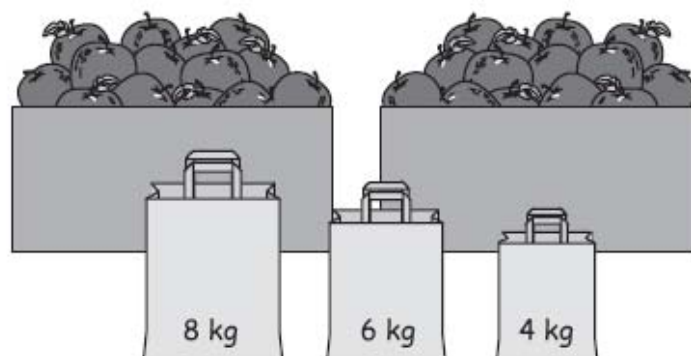
There are
8 ways to giveaway
all of your apples

Score

--

Grade 4 Numeracy Question 1 – Exemplar # 6

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

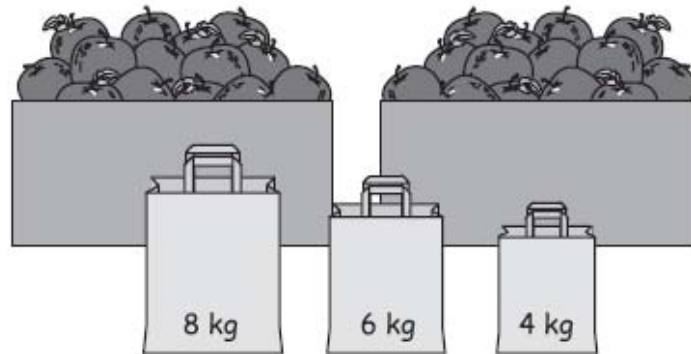
How many different ways can 24 kg of apples be given away?

Show ALL your work.

One way is six bags of 4 kg. (4 marks)
 $24 \div 4 = 6$. Another way is four bags of 6 kg, $24 \div 6 = 4$. Also it could be 3 bags of 8 kg, $24 \div 8 = 3$. One more way is 2 bags of 6 kg one bag of 4 kg and one bag of 8 kg, $6 + 6 + 4 + 8 = 24$. One other way is 2 bags of 4 kg and 2 bags of 8 kg, $4 + 4 = 8 + 8 + 8 = 24$. You could also do 3 bags of 4 kg and 2 bags of 6 kg, $4 + 4 + 4 = 12 + 12 = 24$.

Grade 4 Numeracy Question 1 – Exemplar # 7

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

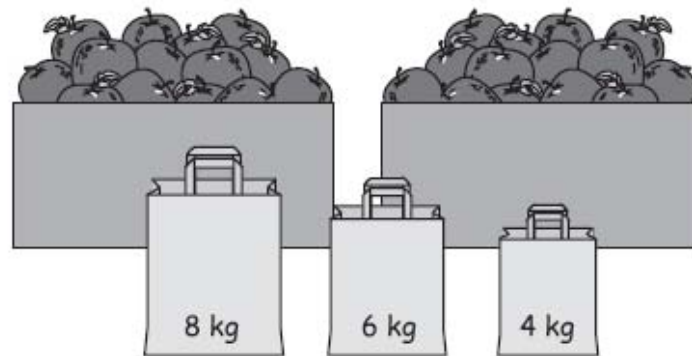
How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

$$8 + 6 + 4 + 6 = 24 \text{ kg} \quad 6 + 8 + 6 + 4 = 24 \text{ kg}$$

Grade 4 Numeracy Question 1 – Exemplar # 8

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

$$3 \times 8 \text{ kg} = 24 \text{ kg}$$

$$6 \times 4 \text{ kg} = 24 \text{ kg}$$

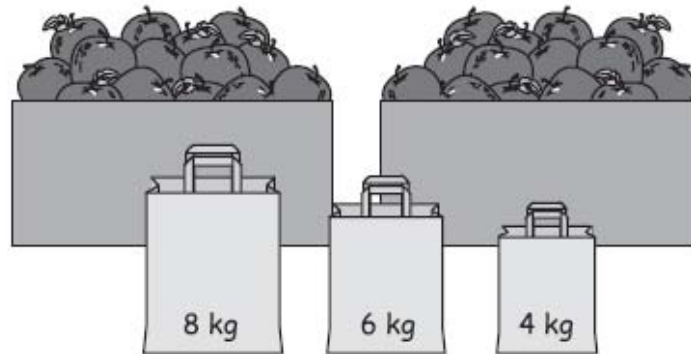
$$3 \times 8 \text{ kg} = 24 \text{ kg}$$

$$2 \times 4 \text{ kg} + 8 \text{ kg} + 6 \text{ kg} = 24 \text{ kg}$$

$$4 \times 6 \text{ kg} = 24 \text{ kg}$$

Grade 4 Numeracy Question 1 – Exemplar # 9

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

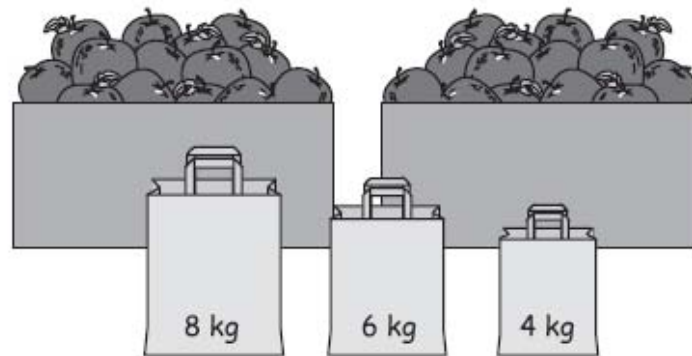
How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

$$8 + 6 + 4 + 6 = 24$$
$$4 + 8 + 4 + 8 = 24$$
$$6 + 6 +$$

Grade 4 Numeracy Question 1 – Exemplar # 10

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show ALL your work.

you need 3 8kg bags to
get 24

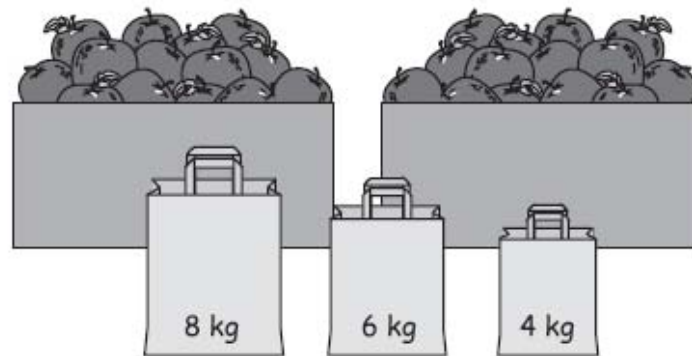
(4 marks)

you need 4 6kg bags
to get 24

you need ~~4~~ 6kg bags
with 24 apples

Grade 4 Numeracy Question 1 – Exemplar # 11

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

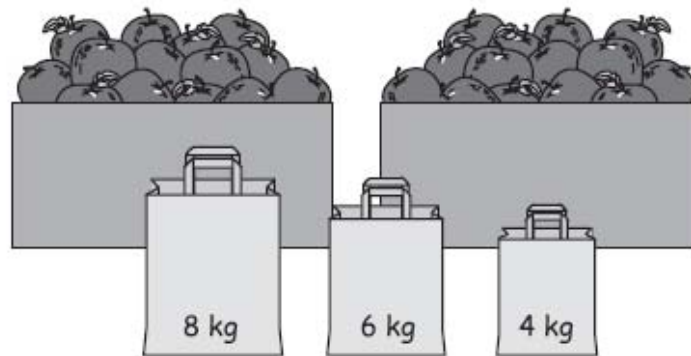
Show **ALL** your work.

(4 marks)

you can divide $24 \div 18 = 75$ you can
add $8 + 8 = 16$ and you can ad
agian $8 + 8 + 6 = 22$ but also you ca
add $6 + 4 = 10$

Grade 4 Numeracy Question 1 – Exemplar # 12

1. The fruit stand has 24 kg of apples to give away.



Students only have 8 kg, 6 kg, and 4 kg bags.

How many different ways can 24 kg of apples be given away?

Show **ALL** your work.

$$\begin{array}{r} 8 \\ + 8 \\ + 4 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 6 \\ + 8 \\ + 4 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 4 \\ + 6 \\ + 8 \\ \hline 18 \end{array}$$

heh 15 18 ways to (4 marks)
 bo in
 $2 \times 4 = 18$
 $4 \times 2 = 18$

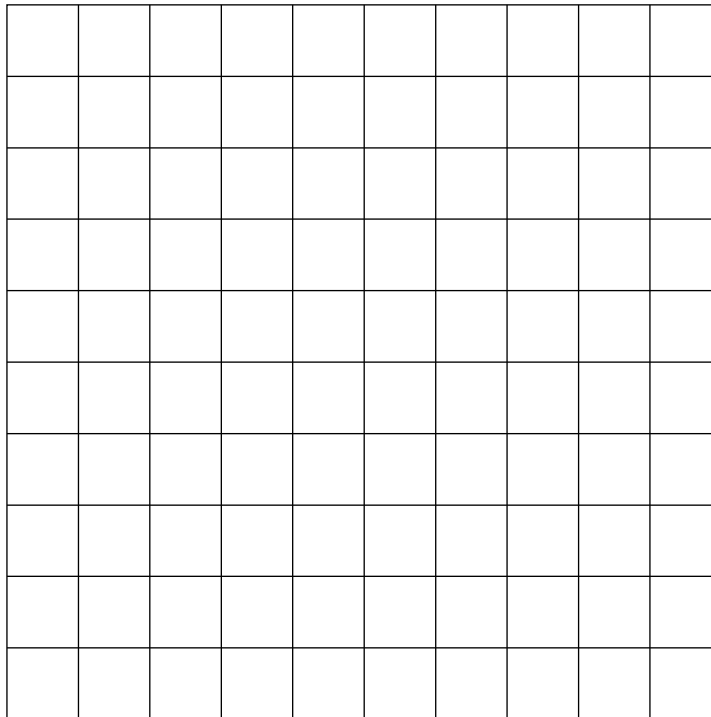
FSA 2009 Grade 4 Numeracy Question 2

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

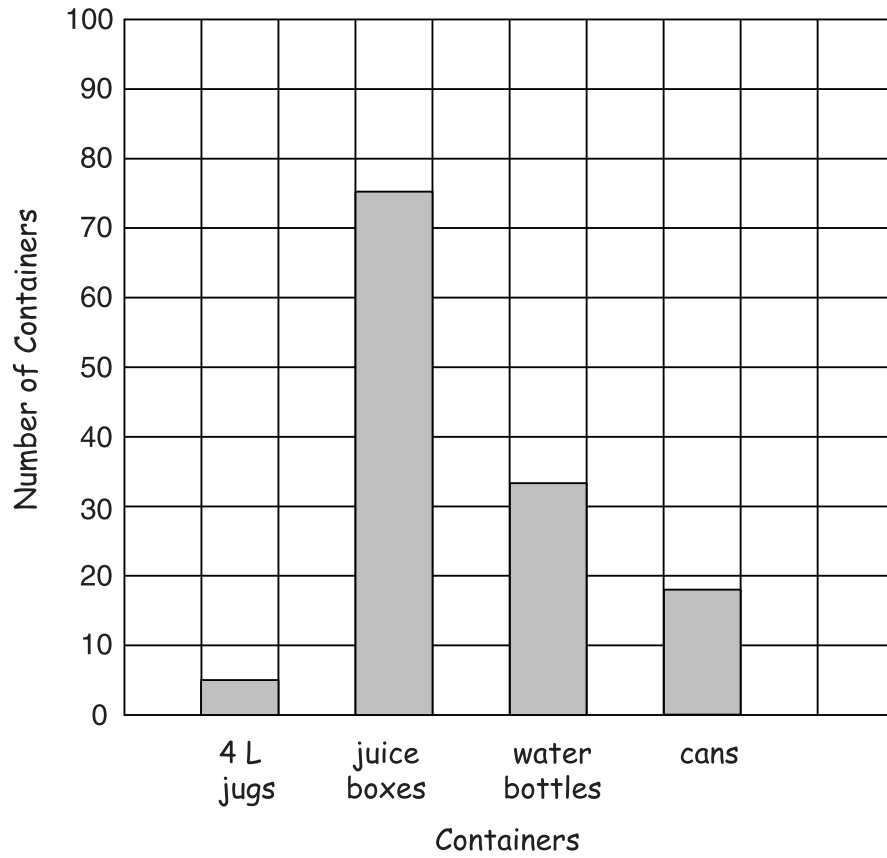
On the grid below, draw and label a bar graph to show this.

SCORING RATIONALES

- Concept:** 3D2—Create a bar graph from a given set of data. Include labelling (title and axes) and bars represent accurate information. Bars are spaced.
4D2—Identify an interval for scale.
- Strategies:** Choose appropriate scale, labels and type of graph.
- Accuracy:** Bars—are correct length, and spaced. Halfs are represented (not labelled).
Labelling—should include title, x - and y -axes.
Scale—should include 0. Appropriate scale.
- Representation**
- Communication:** Information able to be clearly understood.

Solution 1: (next page)

Drink Containers Collected in a Week



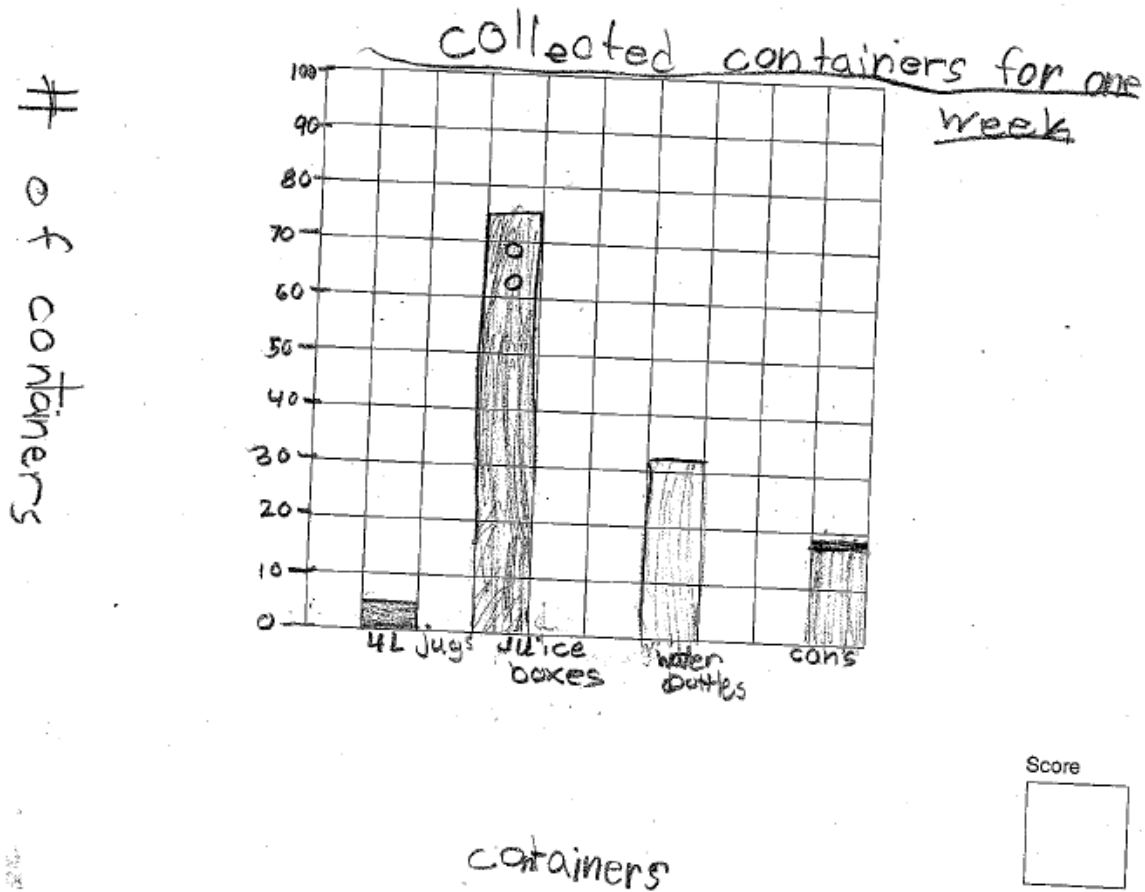
Grade 4 Numeracy Question 2 – Exemplar # 1

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



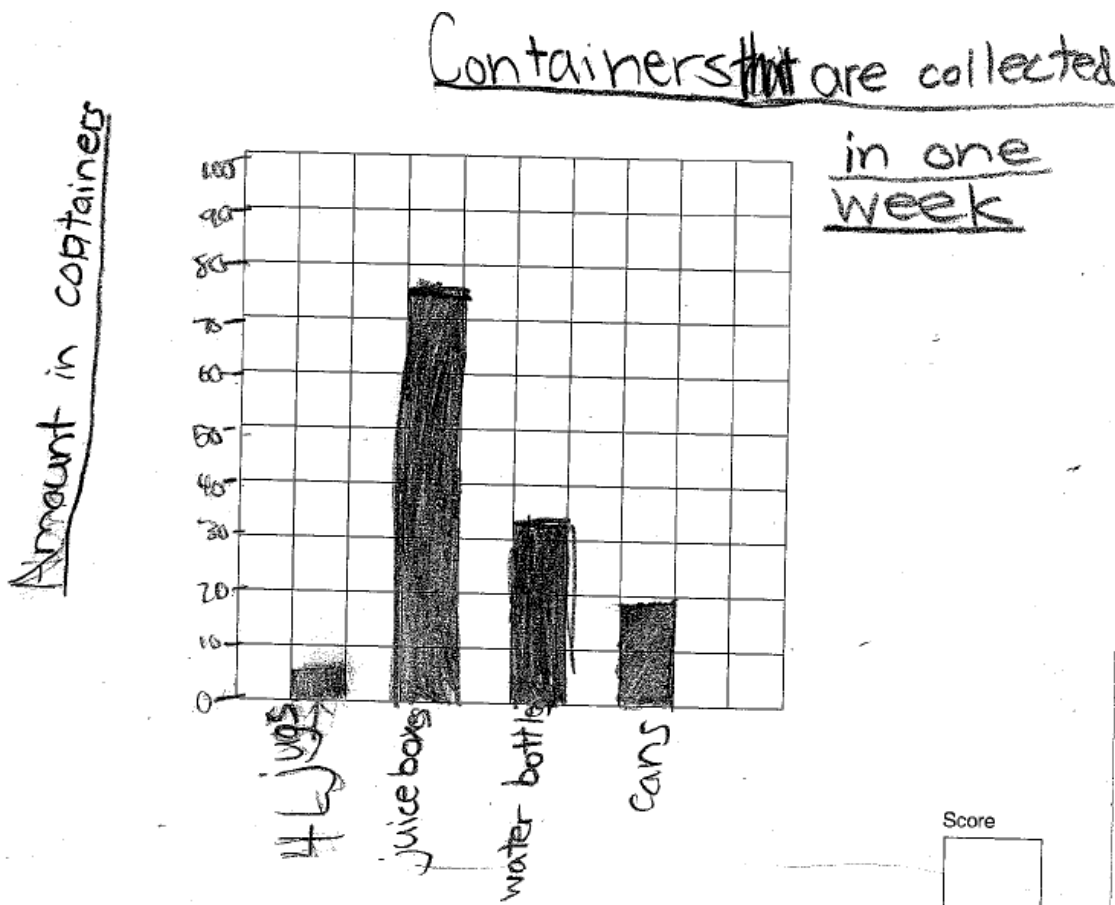
Grade 4 Numeracy Question 2 – Exemplar # 2

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



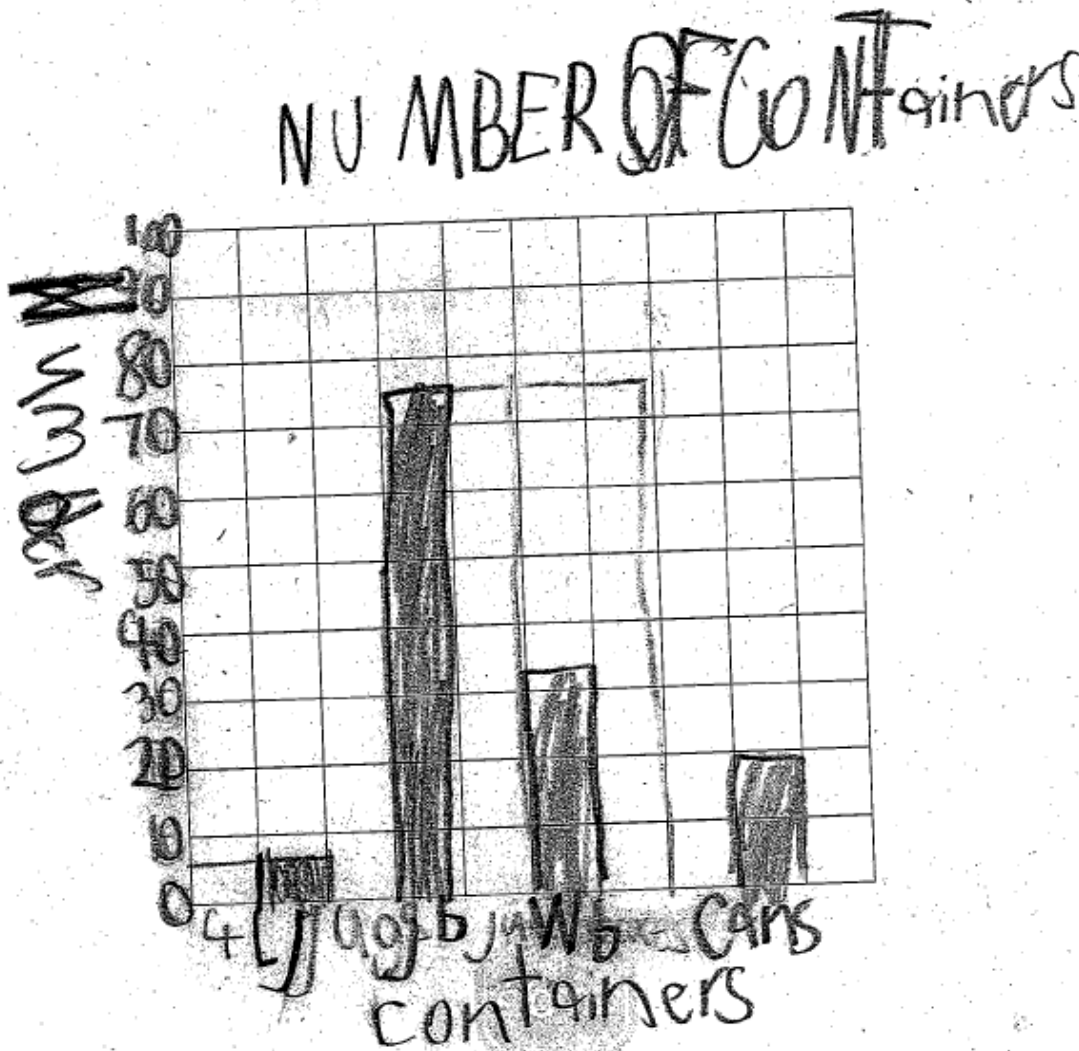
Grade 4 Numeracy Question 2 – Exemplar # 3

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



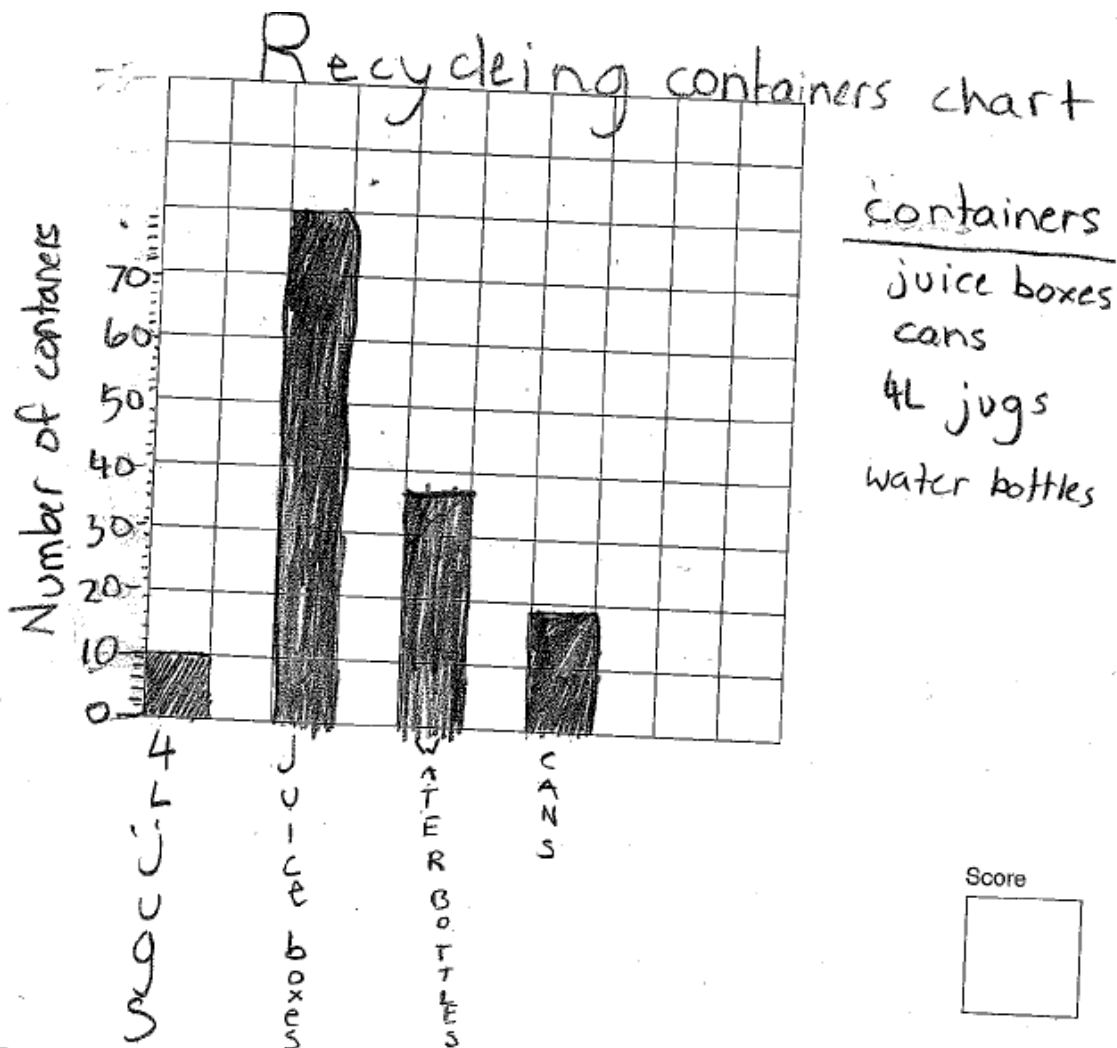
Grade 4 Numeracy Question 2 – Exemplar # 4

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



Score

Grade 4 Numeracy Question 2 – Exemplar # 5

2. The chart shows the drink containers collected in one week.

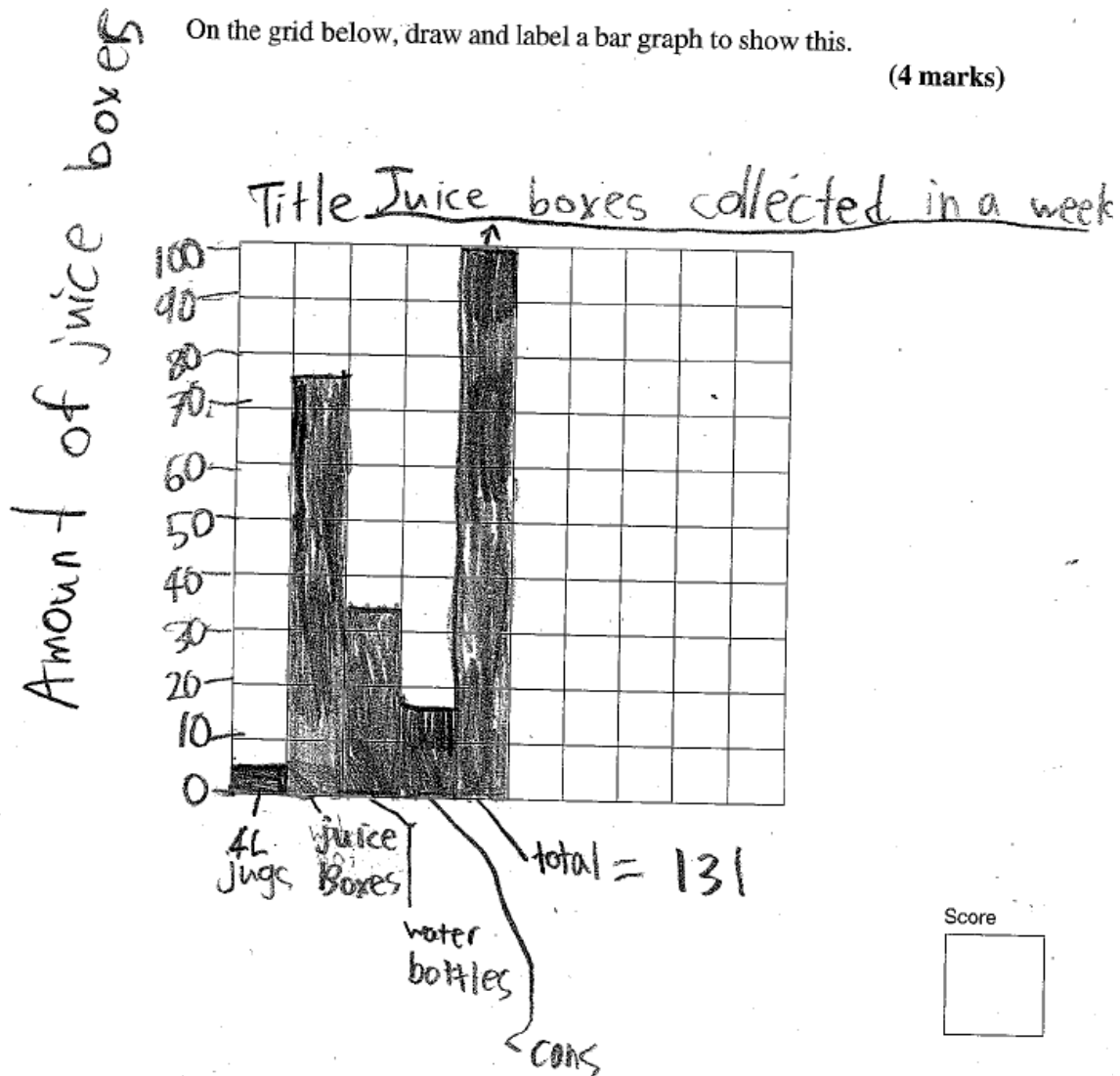
Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)

On the grid below, draw and label a bar graph to show this.

(4 marks)



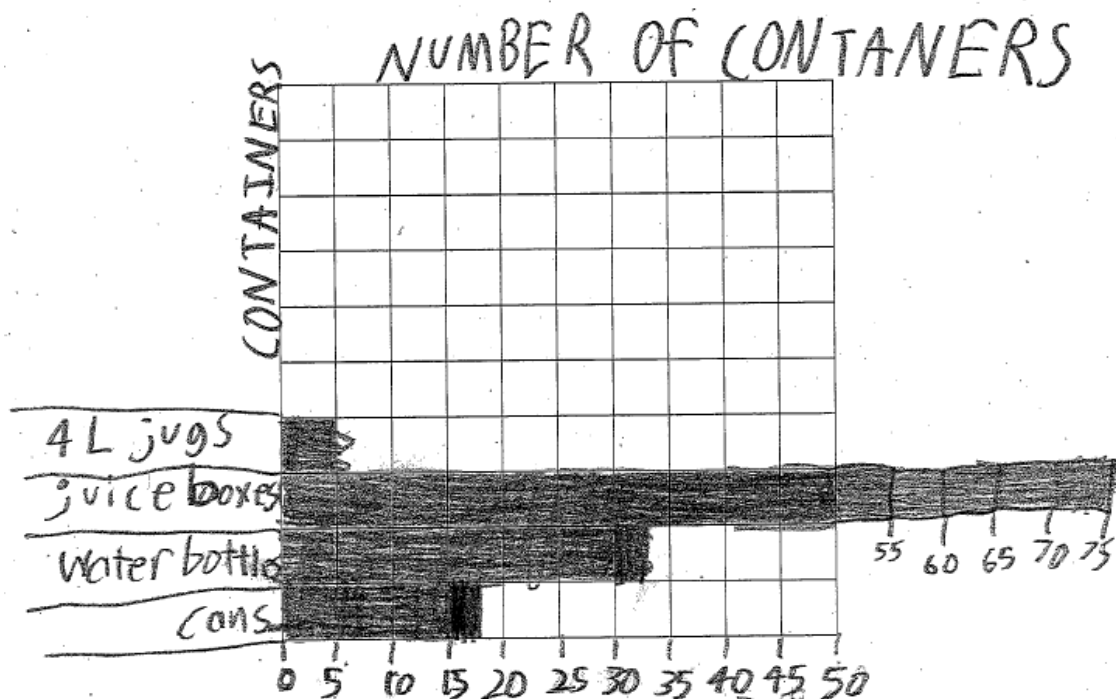
Grade 4 Numeracy Question 2 – Exemplar # 6

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



Grade 4 Numeracy Question 2 – Exemplar # 7

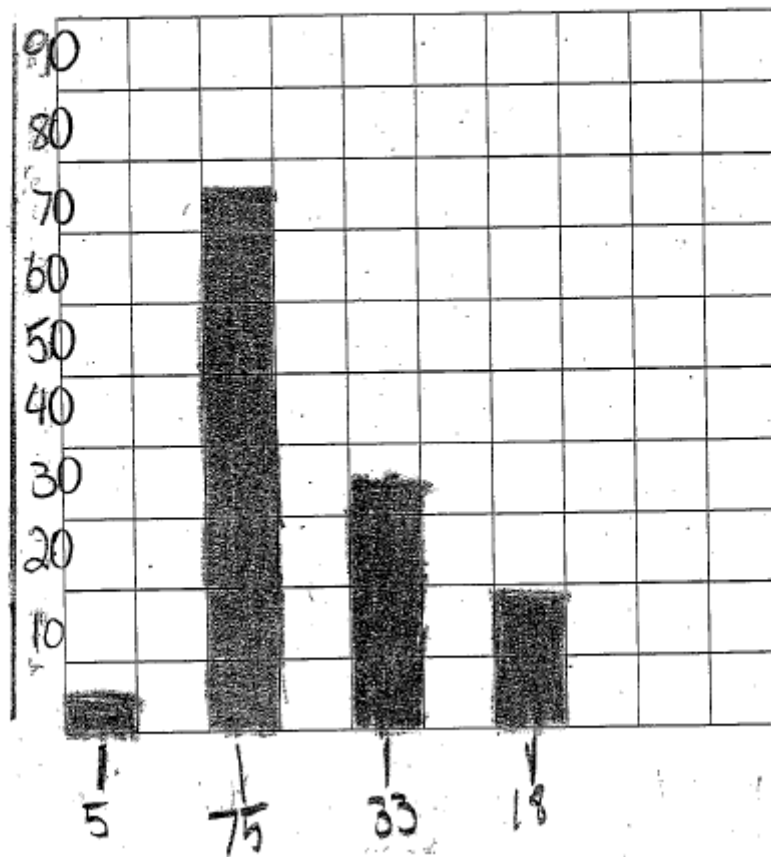
2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)

Drink Containers Collected
in 1 week



Grade 4 Numeracy Question 2 – Exemplar # 8

2. The chart shows the drink containers collected in one week.

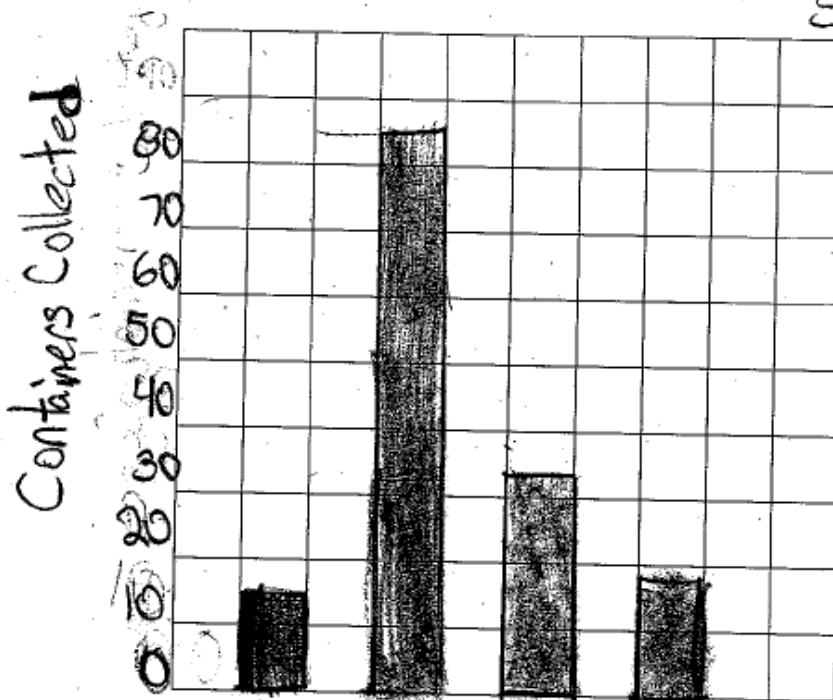
Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)

Drink Containers collected

$R = \square \rightarrow 10$
 $S = 0 \rightarrow 80$



Grade 4 Numeracy Question 2 – Exemplar # 9

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

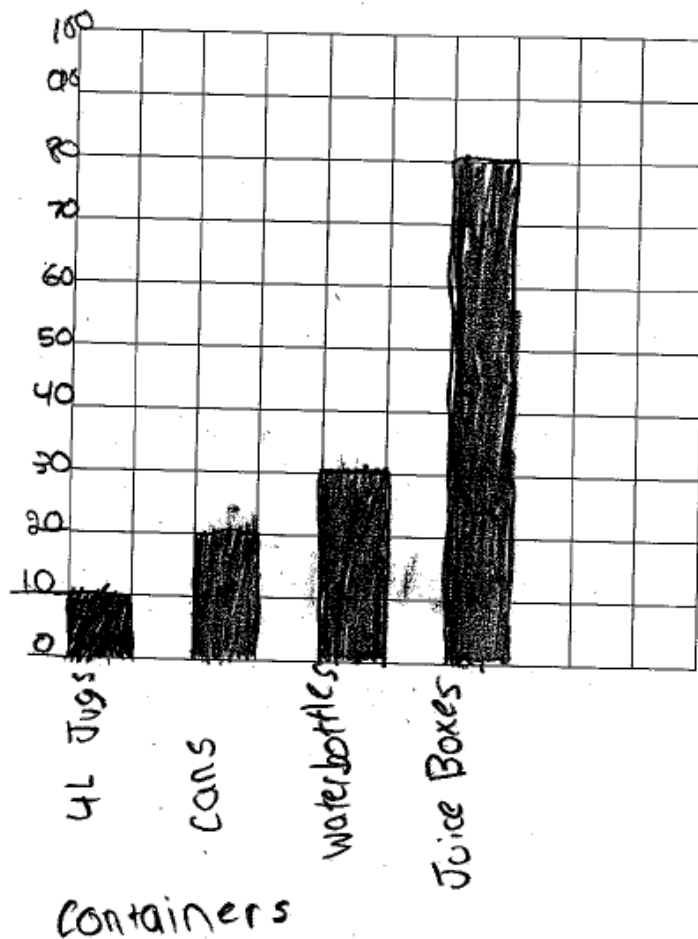
On the grid below, draw and label a bar graph to show this.

(4 marks)

Containers collected

Number of Containers

R=75
S=10



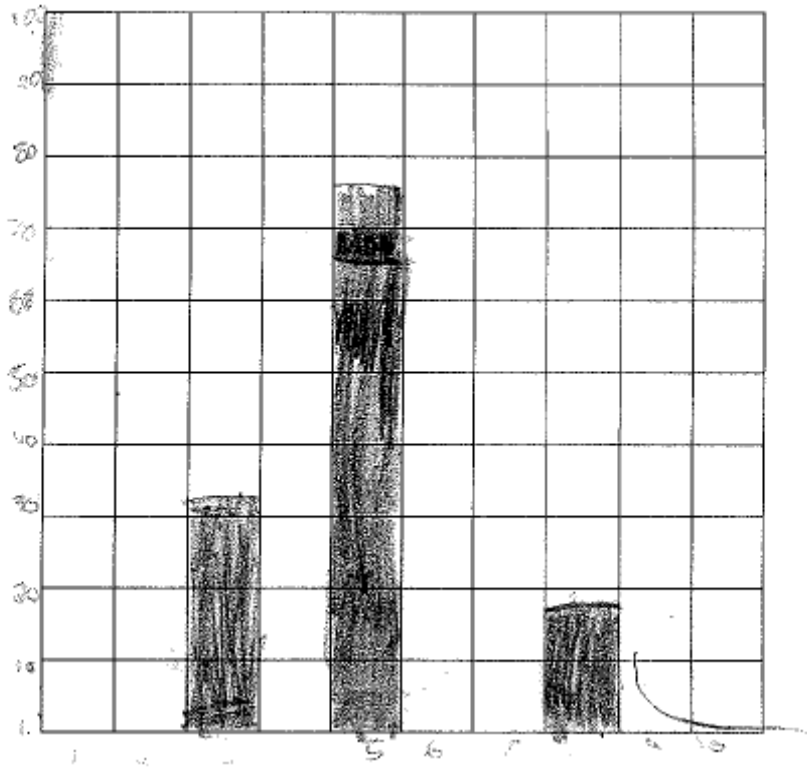
Grade 4 Numeracy Question 2 – Exemplar # 10

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



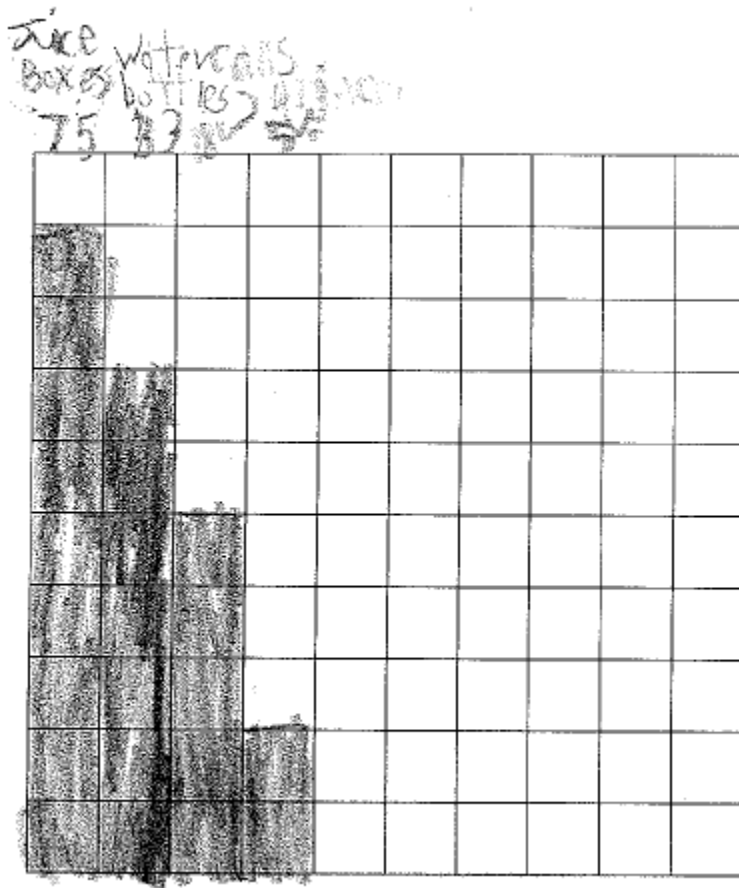
Grade 4 Numeracy Question 2 – Exemplar # 11

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)



Grade 4 Numeracy Question 2 – Exemplar # 12

2. The chart shows the drink containers collected in one week.

Containers	Number of Containers
4 L jugs	5
juice boxes	75
water bottles	33
cans	18

On the grid below, draw and label a bar graph to show this.

(4 marks)

