Three Act Task Recording Sheet: Sugar Cubes

Date _3-20-19_

What questions come to your mind as a mathematician when seeing this video?

·How many sugar cubes fill the box?
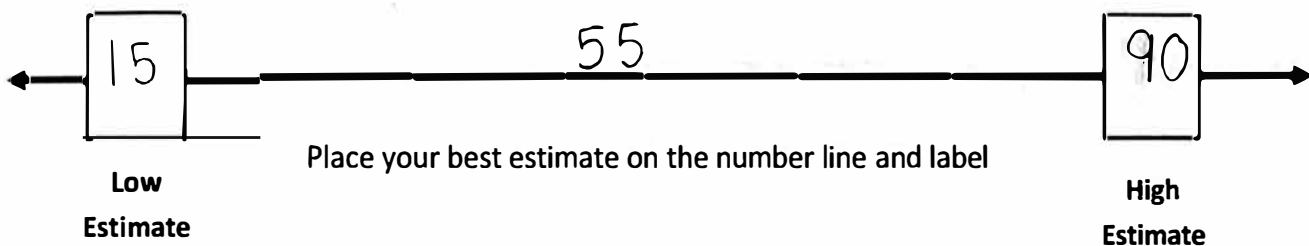·How many sugar cubes are actually in the box?
·How big are the sugar cubes?

Main Focus Question _How many sugar cubes are in the box?_

Act 2

What information would you like to know or need to know to solve the problem?

·How big is the box?
·How big is one sugar cube?
·How do they place the sugar cubes in the box?

Estimate:

```
  15 ◄──────────── 55 ────────────► 90
```

Low Estimate	Place your best estimate on the number line and label	**High Estimate**

Any observations made after seeing the second video?

· 3 rows
· 6 columns
· 18 in each layer
· 180
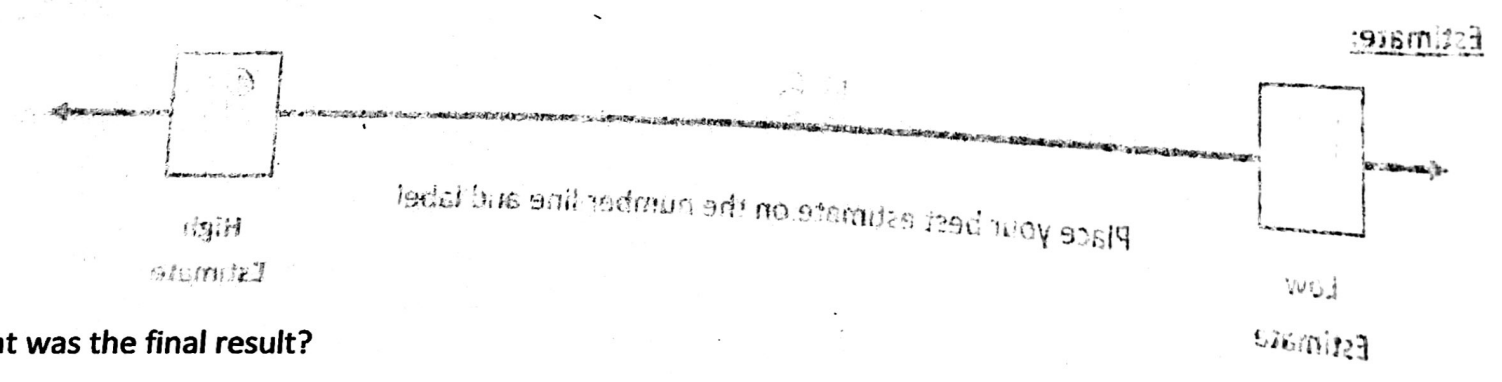
Three Act Task Recording Sheet: Sugar Cubes

Date **3·20·19**

Act 1

What questions come to your mind as a mathematician when seeing this video?

- How many cubes can fit in the box?
- How big is each cube?
- How big is the box?
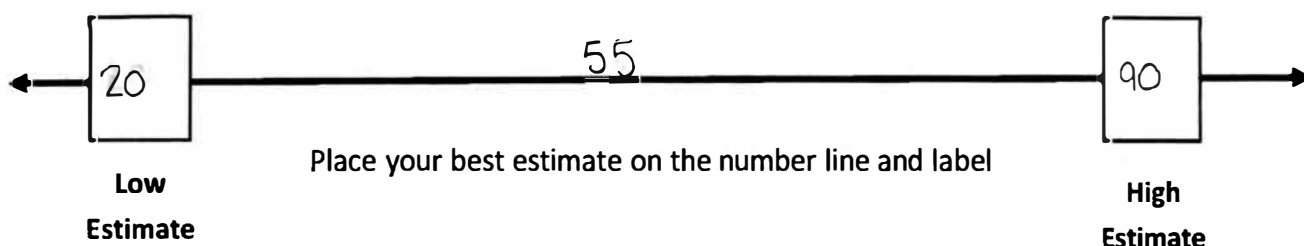- How many cubes are acutally in the box?

Main Focus Question ___How many sugar cubes are there in the box?___

Act 2

What information would you like to know or need to know to solve the problem?

The size of the box
The size of the sugar cubes
The placement of the sugar cubes

Estimate:

20   55   90

Low Estimate   Place your best estimate on the number line and label   **High Estimate**

Any observations made after seeing the second video?

- 6 columns (3 in each)
- 3 rows (6 in each)
- 18 in each layer

Estimate: 180

Use this area for work, tables, calculations, sketches, to find the final solution-

$$\begin{array}{r} 18 \\ \times\,11 \\ \hline 18 \\ +180 \\ \hline 198 \end{array}$$
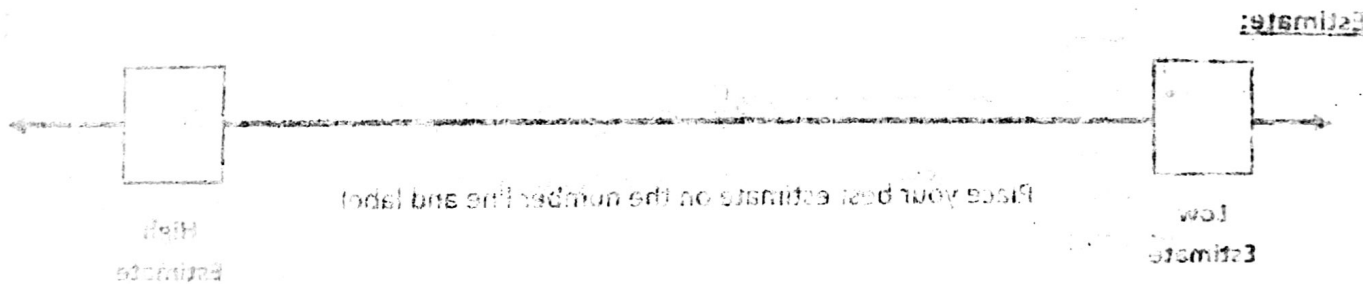
Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Date _Mar 20 2019_

Act 1

What questions come to your mind as a mathematician when seeing this video?

- How many more in sugar cubes are in the box?

- How many sugar cubes are in the box?

- How many colories? — A
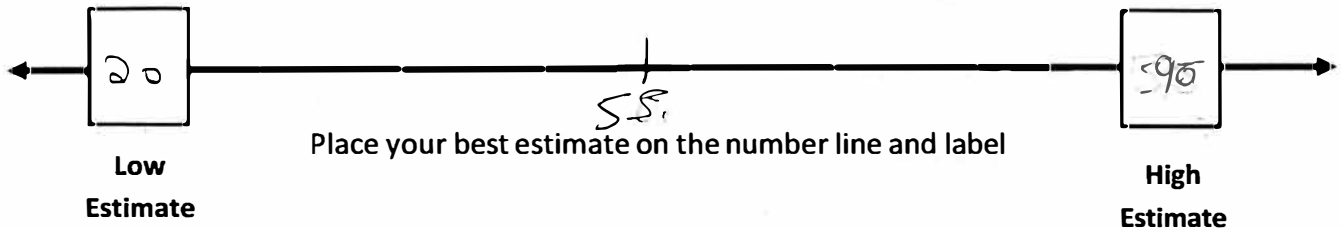
- How much does each box costs?

Main Focus Question _How many sugar cubes are in the box_

Act 2

What information would you like to know or need to know to solve the problem?

The sizes of sugar cubes

The placement of the cubes

Estimate:

20   55   90

Low Estimate   Place your best estimate on the number line and label   **High Estimate**
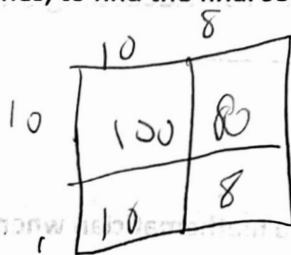
Any observations made after seeing the second video?

- 6 columns   the height

- 3 rows   is about 10

- about 180 cubes in box

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
18 \\
\times 11 \\
\hline
18 \\
+ 180 \\
\hline
198
\end{array}
$$

	10	8
10	100	80
	10	8

$$
\begin{array}{r}
100 \\
+ 80 \\
1 \\
8 \\
\hline
198
\end{array}
$$

Act 3

the box

hree Act Task Recording Sheet: Sugar Cubes

Date 3-20-19

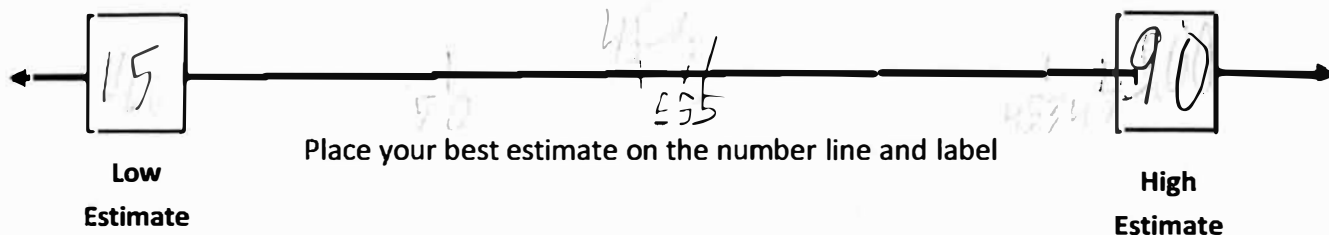**What questions come to your mind as a mathematician when seeing this video?**

'How many more sugar cubes are in the box?

'How mny sugar cubes are in the box?

'If one sugar cube weighs 1 gram and the box weighs 453g wouldn't there be 453 sugar cubes in the box?

Main Focus Question How many sugar cubes are in the box?

Act 2

What information would you like to know or need to know to solve the problem?

'Size(box)

'Size(sugarcube)

'placement of sugar cubes in box

Estimate:

15 — Low Estimate

555

90 — High Estimate

Place your best estimate on the number line and label

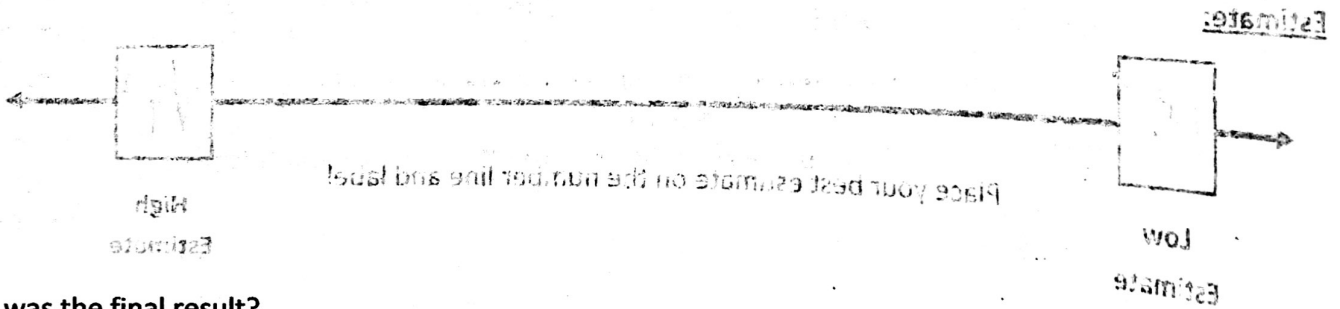**Any observations made after seeing the second video?**

'3 rows

'6 coloms

'height about 10

'about 180 cubes in box

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
18 \\
\times 11 \\
\hline
18 \\
+ 180 \\
\hline
198
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Name_ _____ _____   Date___3-20-19_____

Act 1

What questions come to your mind as a mathematician when seeing this video?

How many Sugar cubes are in all?
How much does each one cost?
Sugar cubes are just Sugar just Sugar.

Main Focus Question _How many Sugar cubes are in that box?_
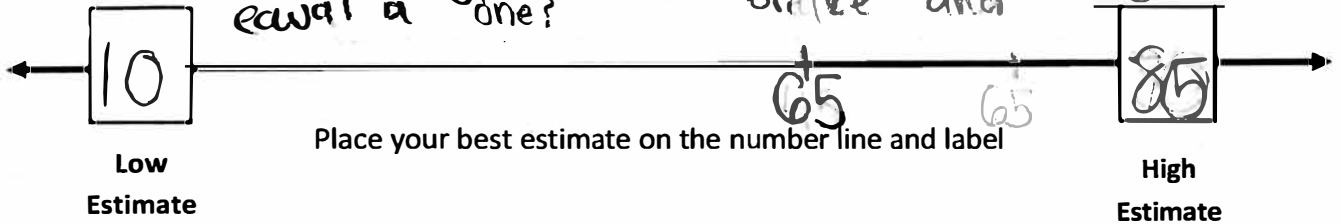
Act 2

What information would you like to know or need to know to solve the problem?

Are they only going to fill it half way or
to the top?

What is the LtW of the box and sugar cubes.
Estimate: Could the Sugar cubes brake and
eaual a one?

10   65   65   85
Low Estimate   Place your best estimate on the number line and label   High Estimate

Any observations made after seeing the second video?

3×6 = 18 cubes per layer

$$\begin{array}{r} {}^{1}18 \\ \times\ 2 \\ \hline 36 \end{array}$$

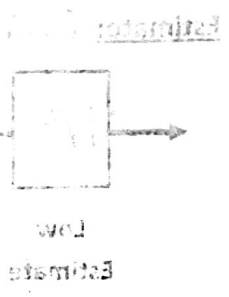Use this area for work, tables, calculations, sketches, to find the final solution-

$$216 \qquad 18$$
$$\times 12$$
$$\overline{36}$$
$$+\overset{1}{1}80$$
$$\overline{116}$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

$$\times \overset{1}{1}\overset{1}{8}$$
$$\overline{18}$$
$$+18\,0$$
$$\overline{198}$$

What was the final result?

198 Sugar cubes in each box

Three Act Task Recording Sheet: Sugar Cubes

Date __3-20-19__

What questions come to your mind as a mathematician when seeing this video?

What is the length, width, height and volume of the box?

How many cubes are in 1 box?

How much does each box cost?

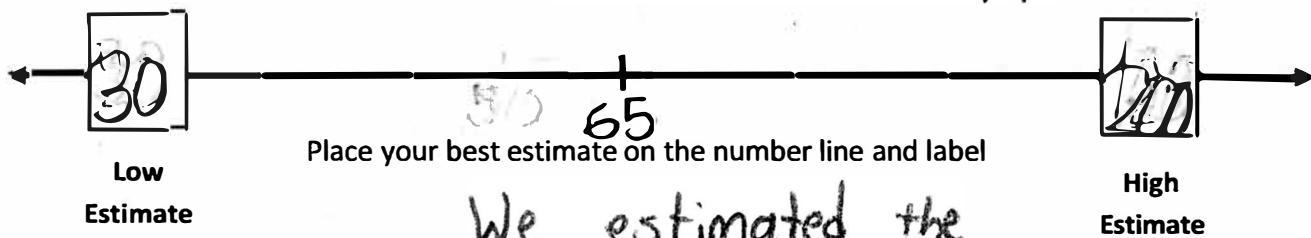**Main Focus Question** __How many sugar cubes are in that box?__

Act 2

What information would you like to know or need to know to solve the problem?

What is length and width of one sugar cube?

What is the length and width of the whole box?

Are the sugar cubes all the same size?

Is the box filled to the top?

Estimate:

30 Low Estimate

65

High Estimate

Place your best estimate on the number line and label

We estimated the

Any observations made after seeing the second video?

3x6 area

They are staacked

```
  5        4          1
  18       18         18
 +18      x 8       x 12
 ____     ____      ____
  128      108      + 1 0 -
                     36
```

8 . 716

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
1\\
18\\
\times 12\\
\hline
36\\
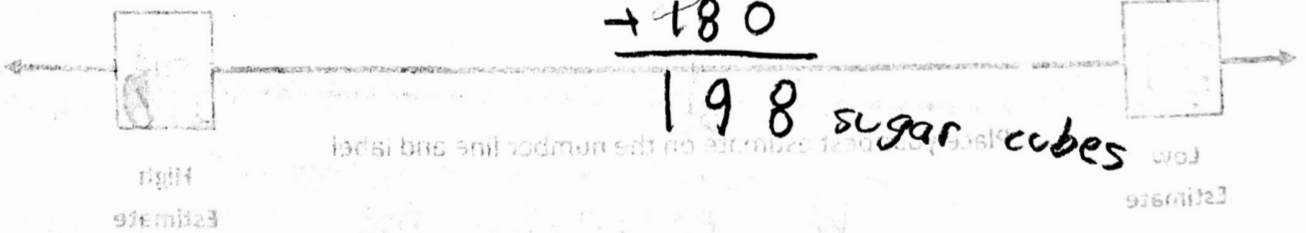+180\\
\hline
216
\end{array}
$$

18 in one layer.

I think there are 12 layers.

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

$$
\begin{array}{r}
18\\
\times 11\\
\hline
18\\
+180\\
\hline
198
\end{array}
$$ sugar cubes

3×6×11 = Volume of box

What was the final result?

198 sugar cubes in one full box.

Three Act Task Recording Sheet: Sugar Cubes

Date __3-20-19__

_____

___

What questions come to your mind as a mathematician when seeing this video?

• How many sugar cubes are there?

• Why did he show us the side of the box?
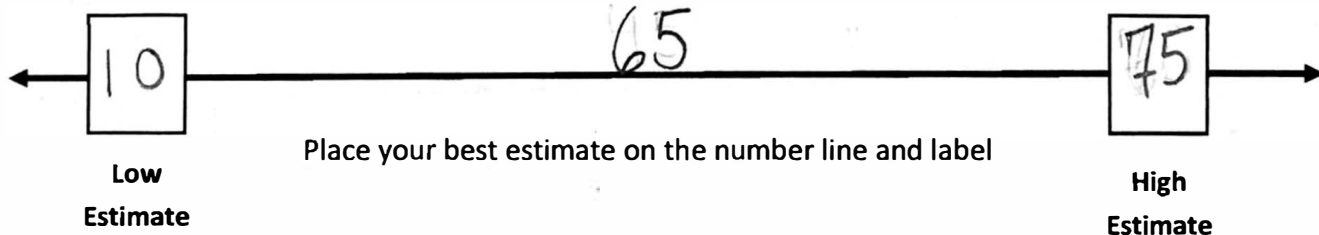
• what are the sugar cubes for?

Main Focus Question How many sugar cubes are in the Box

Act 2

What information would you like to know or need to know to solve the problem? same size?

• Are all sugar cubes the same

• will they Fill to the top or half way?

• whats the volume of the box?

• did some break?

Estimate:

|10| 65 |75|

Low Estimate   Place your best estimate on the number line and label   High Estimate

Any observations made after seeing the second video?

$3 \times 6 = 18$

$18 \times 7 =$

$$\begin{array}{r} \overset{4}{18} \\ \times\ 6 \\ \hline 108 \end{array}$$

$$\begin{array}{r} 18 \\ \times 12 \\ \hline 36 \\ 180 \\ \hline 216 \end{array}$$

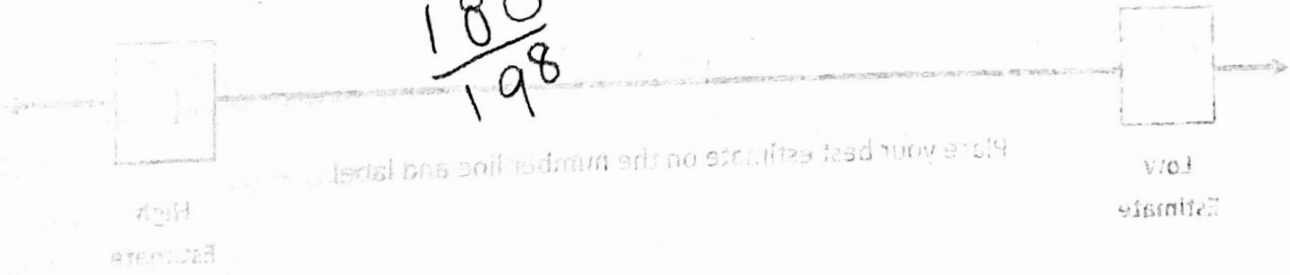Use this area for work, tables, calculations, sketches, to find the final solution-

216

$$\begin{array}{r} 1 \\ 18 \\ \times\ 12 \\ \hline 36 \\ 180 \\ \hline 216 \end{array}$$

|| ROWS♡!!

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

$$\begin{array}{r} 18 \\ \times\ 11 \\ \hline 18 \\ 180 \\ \hline 198 \end{array}$$

What was the final result?

⊛ 198 Sugar cubes!

Three Act Task Recording Sheet: Sugar Cubes

Date 3-20-13

What questions come to your mind as a mathematician when seeing this video?

How many suger cubes are there?
How much does the box of suger cubes weigh?
How much does a cube of suger weigh
How much does each box cost?

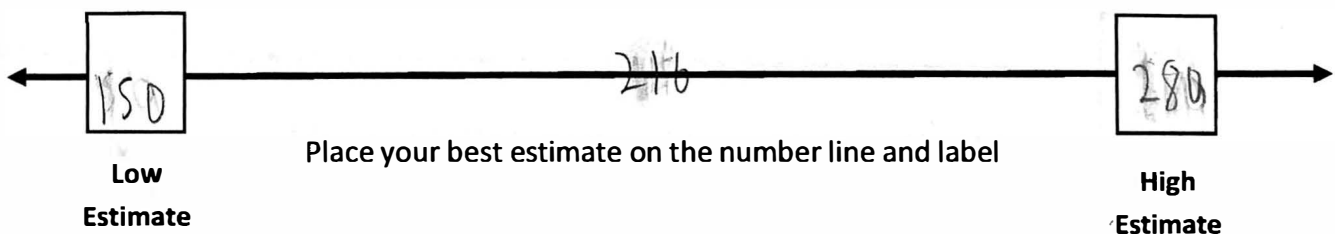**Main Focus Question** How many suger cubes are in the box

Act 2

What information would you like to know or need to know to solve the problem?

I would like to know the length the width and the height of the suger cube and the box

Estimate:

150 Low Estimate   2116   280 High Estimate

Place your best estimate on the number line and label

Any observations made after seeing the second video?

On each layer there is 18 cubes. On the sides there is 3 cubes an oh the front there is 6 cubes.
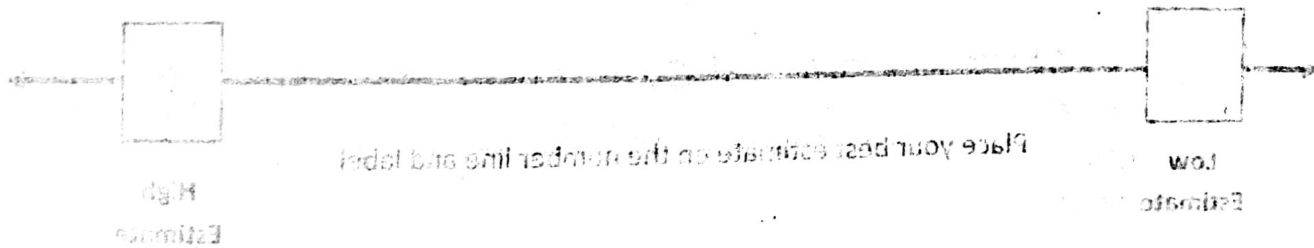
Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
\overset{1}{1}8 \\
\times 12 \\
\hline
36 \\
+186 \\
\hline
216
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

There is 11 rows of 18 suger cubes

What was the final result?

$$
\begin{array}{r}
18 \\
\times 11 \\
\hline
18 \\
+180 \\
\hline
198
\end{array}
$$

Three Act Task Recording Sheet: Sugar Cubes

Name_____   Date_____3-20-19_____

Act 1

What questions come to your mind as a mathematician when seeing this video?

How many Sugar cubes Dots are there?
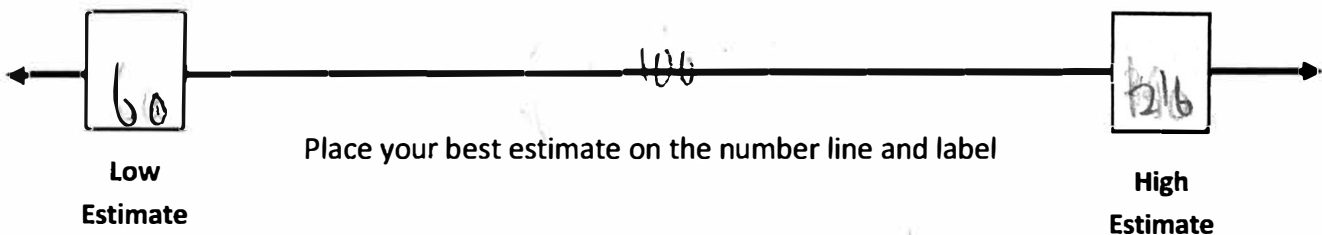How much Sugar cubes Dots will they be if you put it In fourths?

Main Focus Question How many Sugar cubes Dots are there In the Box?

Act 2

What information would you like to know or need to know to solve the problem?

I will like to know the length, width, and hight; be order to find how much Sugar cubes

Estimate:

Low Estimate — 60

100

High Estimate — 216

Place your best estimate on the number line and label

$$\begin{array}{r} 18 \\ \times 12 \\ \hline 136 \\ +180 \\ \hline 216 \end{array}$$

Any observations made after seeing the second video?

There is 3 length and 6 width so there is 18 cubes in every layer.

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
18 \\
\times 12 \\
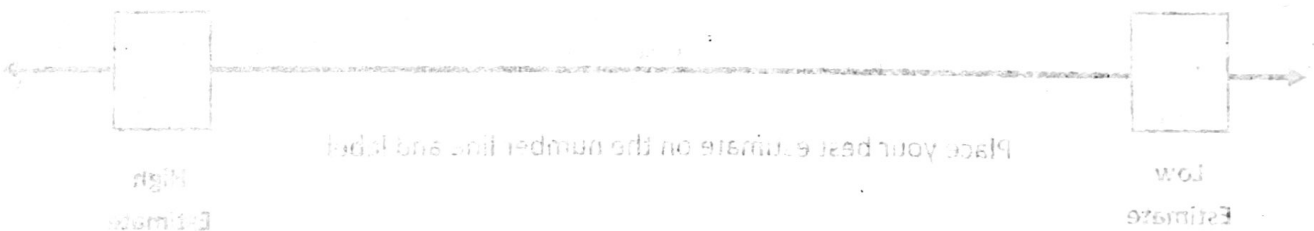\hline
36 \\
+180 \\
\hline
216
\end{array}
$$

$$
\begin{array}{r}
12 \\
\times 18 \\
\hline
96 \\
+120 \\
\hline
216
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

There is 11 hignt, 3 length, ams 6 width so there is 198

$$
\begin{array}{r}
19 \\
\times 4 \\
\hline
18 \\
+180 \\
\hline
198
\end{array}
$$

What was the final result?

There is 198 sugar cubes,

$$
\begin{array}{r}
18 \\
\times 11 \\
\hline
18 \\
4\,80 \\
\hline
198
\end{array}
$$

Three Act Task Recording Sheet: Sugar Cubes

Date **3/20/19**

What questions come to your mind as a mathematician when seeing this video?

How many sugar cubes come in that Particular Box?

How much sugar does it contain?

Are there any other shapes that you can make it into instead of cubes.

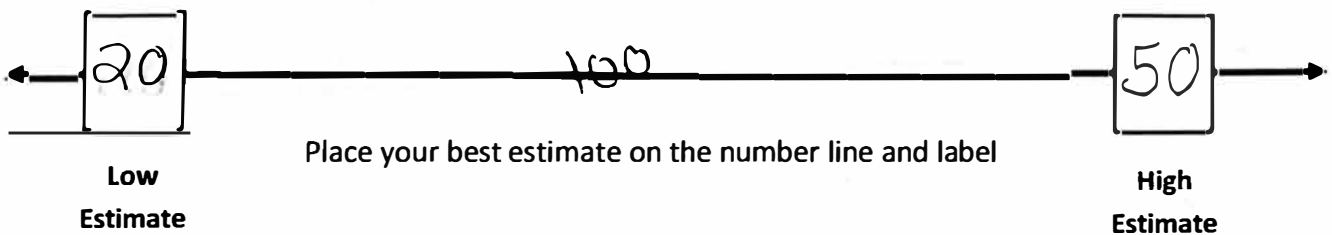**Main Focus Question** How many Sugar Cubes are in that box?

Act 2

What information would you like to know or need to know to solve the problem?

I would like to know Length, the width, and the height because you need to know the height of the cube to figure out how tall the cube is.

| |

Estimate:

20 — Low Estimate

100

50 — High Estimate

Place your best estimate on the number line and label

Any observations made after seeing the second video?

Some observation that I made was there was 6 at the bottom and 3 on the side which is 18 because 6×3=18 but there is other cubes on the bottom holding it up which makes it more than 18 cubes or sugar cubes.

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
+ \\
18 \\
\underline{18} \\
36 \\
180 \\
\underline{+} \\
216
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

There all Going down and 3 going up and 6 going over so I would multiply 11 × 6 = 66 and then 66 × 3 = 198.
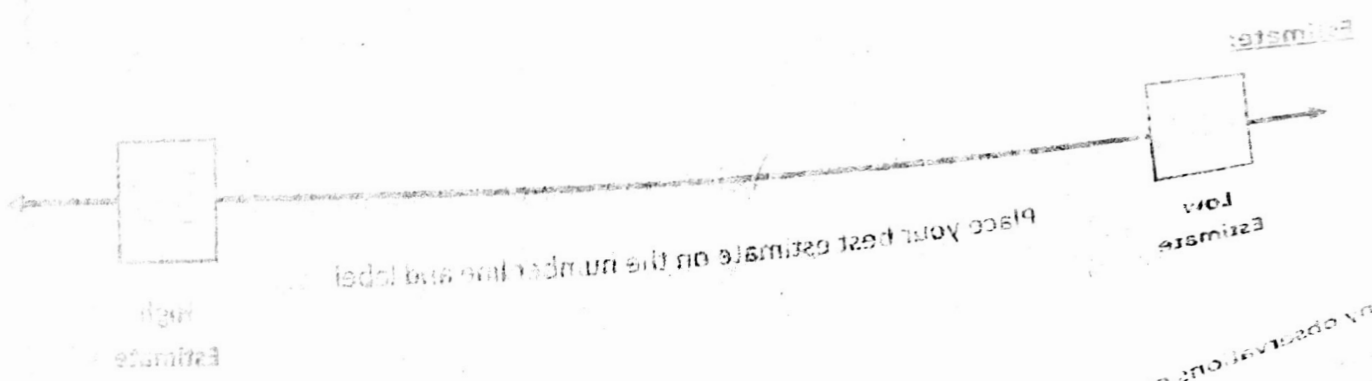
What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Date _March 20, 2019_

_____

What questions come to your mind as a mathematician when seeing this video?

how many cubes are left in the box?
how much does one cube weigh?
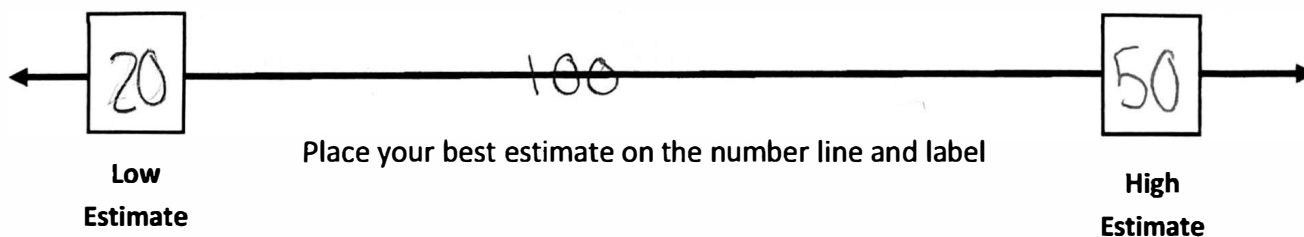how much sugar does it contain?

Main Focus Question _How many sugar cubes are in the box?_

Act 2

What information would you like to know or need to know to solve the problem?

I would like to know the length, width, and the hight to find the length of the box?

Estimate:

Low Estimate: 20   100   High Estimate: 50

Place your best estimate on the number line and label

Any observations made after seeing the second video?
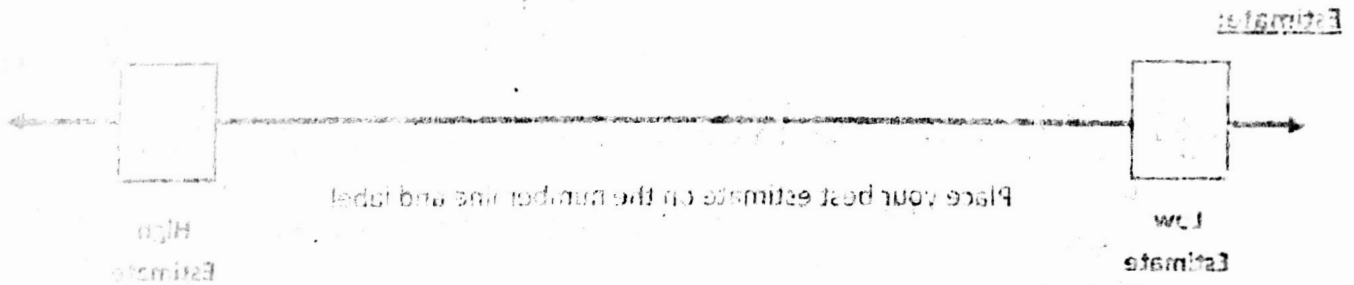
There are 3 cubes and 6 cubes.

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
x \\
18 \\
\times 2 \\
\hline
36 \\
180 \\
\hline
216
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

There are 11 layers of 18 cubes in each layer of cubes.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Date 3-20-19

Act 1

What questions come to your mind as a mathematician when seeing this video?

How many sugar cubes are in one box?
Are the sizes of the sugar cubes the same?
Do the sugar cubes fill to the height and width of the box?

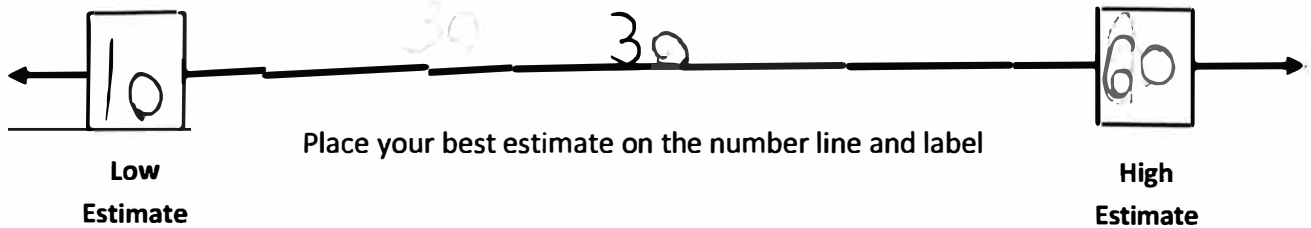**Main Focus Question** How many sugar cubes are in one box?

Act 2

What information would you like to know or need to know to solve the problem?

We need to figure out the size of each sugar cube.
We need to figure out how big the box

Estimate: 15,

10 — Low Estimate

30

60 — High Estimate

Place your best estimate on the number line and label

Any observations made after seeing the second video?

$3 \times 6 = 18$

$18 \times 6 = 180$

$18 \times 5 = 90$

Front view

Side view
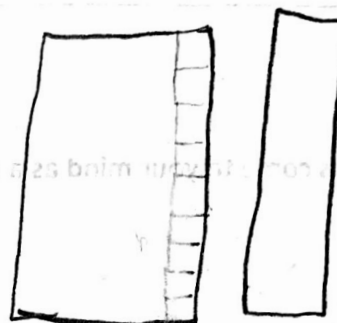
Use this area for work, tables, calculations, sketches, to find the final solution-

$18 \times 5 = 90$ ~~(crossed out)~~

$18 \times 6 = 180$ ~~(crossed out)~~
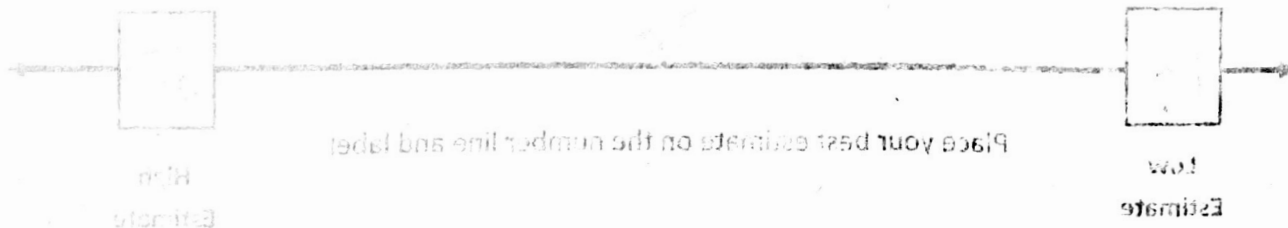
198

$11 \updownarrow$

$18 \leftrightarrow$

$$\begin{array}{r} 18 \\ \times 11 \\ \hline 18 \\ +180 \\ \hline \boxed{198} \end{array}$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Name___ *AK* _____ Date___ *9-20-19* _____

Act 1

What questions come to your mind as a mathematician when seeing this video?

How much sugar cubes are in The Box?

are the sides of the sugar cube the same?

How full is the Box?

How much sugar is the cube made of?

How many calories

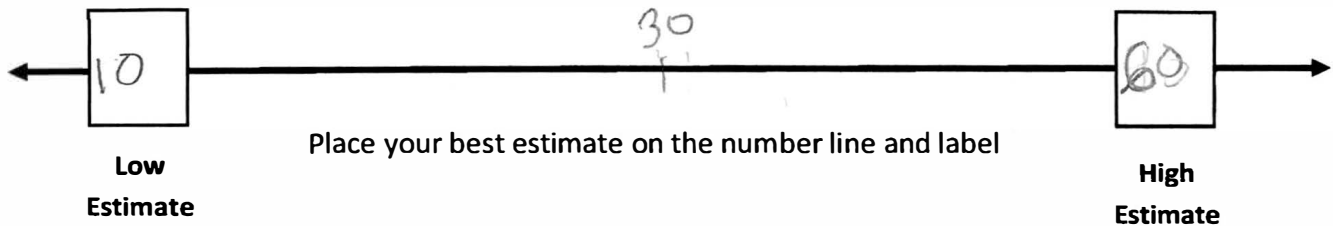**Main Focus Question** _How many Sugar cubes are in the Box?_____

Act 2

What information would you like to know or need to know to solve the problem?
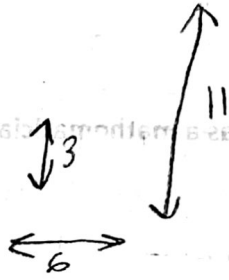
Size of the sugar cubes?

Size of the Box?

Estimate:

10	30	60
Low Estimate	Place your best estimate on the number line and label	**High Estimate**

Any observations made after seeing the second video?
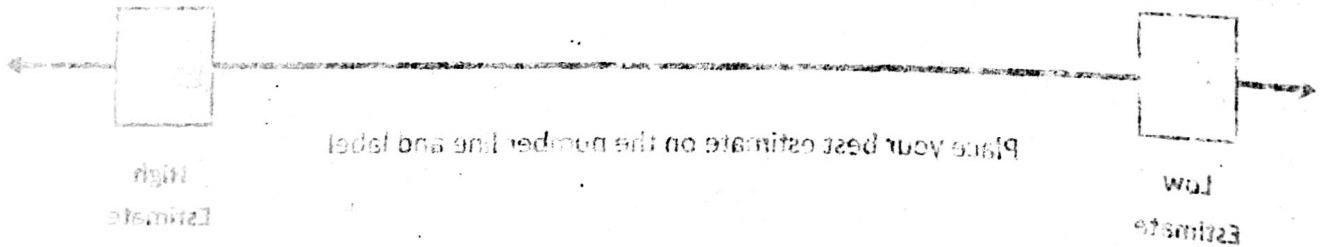
4
×18
_____
108

Use this area for work, tables, calculations, sketches, to find the final solution-

$$
\begin{array}{r}
18 \\
\times\ 11 \\
\hline
18 \\
180 \\
\hline
198
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Name_____   Date_____3/20/19_____

Act 1

What questions come to your mind as a mathematician when seeing this video?

How many Sugar Cubes come in one box?
How much does one box cost?
Are the Sugar cubes the same size?
Do the Sugar cubes fill to the top?
How much does one box weigh?
How much Sugar is the cube made up of?
How many calories?

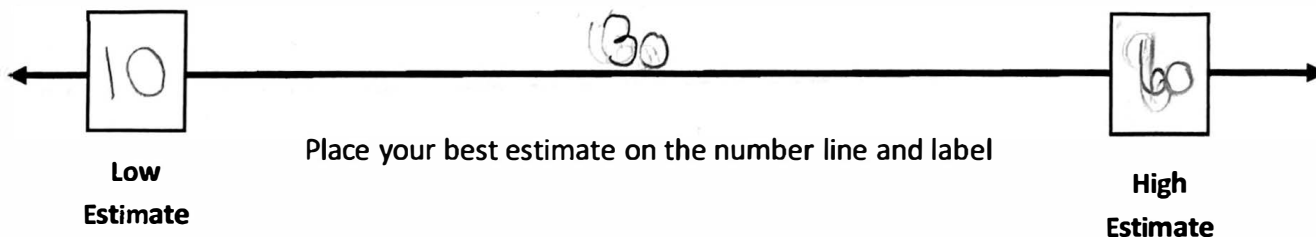**Main Focus Question** _How many Sugar cubes are in 1 box_

Act 2

What information would you like to know or need to know to solve the problem?

The Size of the Sugar cubes.
The Size of the box.
Do they stack them?

Estimate:

10 — Low Estimate   30   60 — High Estimate

Place your best estimate on the number line and label

Any observations made after seeing the second video?

6x3=18
18x5=90

4

Use this area for work, tables, calculations, sketches, to find the final solution-

6×3=18
18×11=108

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

Name

Date 3/20/19

Act 1

What questions come to your mind as a mathematician when seeing this video?

How many sugar cubes does 1 box hold?
How much does one box cost?
How big are the sugar cubes?
Does the sugar cubes fill to the top of the box?
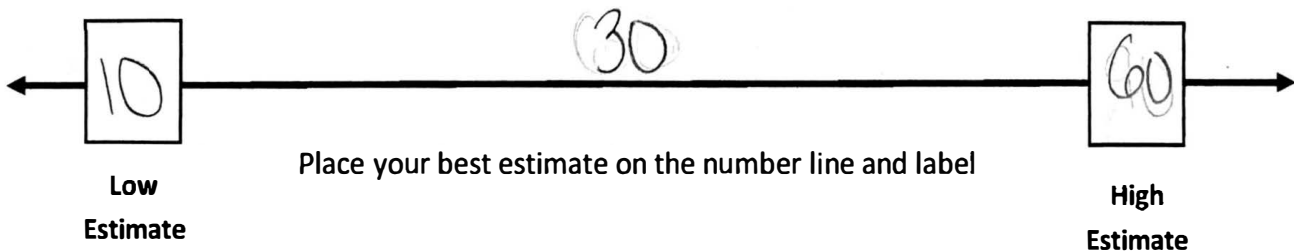How much sugar is the cube made of?
How many calories?

Main Focus Question How many sugar cubes are in 1 box?

Act 2

What information would you like to know or need to know to solve the problem?

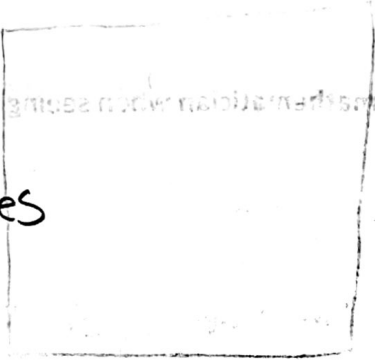Find the size of a sugar cube
The size of the box

Estimate:

10 Low Estimate

30

60 High Estimate

Place your best estimate on the number line and label

Any observations made after seeing the second video?

6 × 3 = 1
18 × 6 = 108
18 × 5 = 90

Use this area for work, tables, calculations, sketches, to find the final solution-
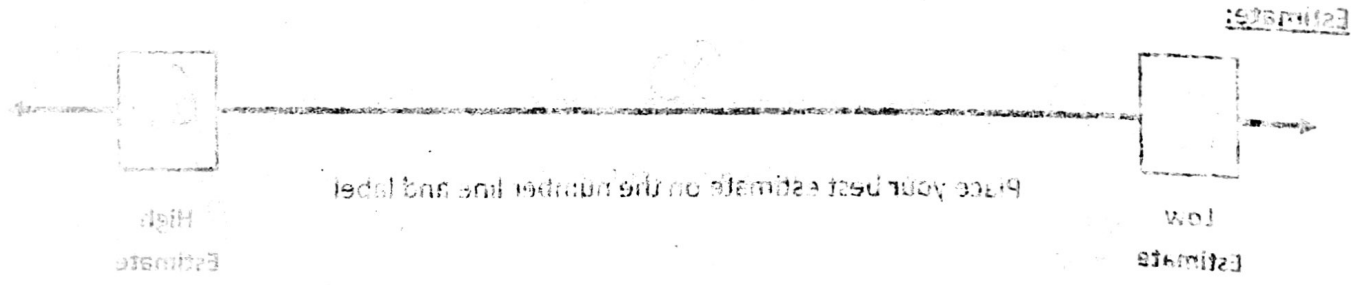
$$
\begin{array}{r}
18 \\
\times\ 17 \\
\hline
18 \\
+\ 180 \\
\hline
\end{array}
$$

198 sugar cubes

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

_____ _____

Act 1

What questions come to your mind as a mathematician when seeing this video?

How many sugar cube is there in each box?

How many ingredients are in the suger?

How much sugar is in each cube?

How much does the box of sugar cubes cost?
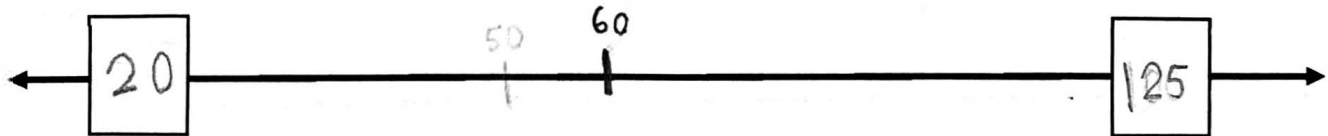
How many groups of 4ths are there?

How many calories?

Main Focus Question How many Sugar cubes care there in the box?

Act 2

What information would you like to know or need to know to solve the problem?

How much volume is in each box? cube? LXWXH

How much sugar is in each sugar cube?

Estimate:


```
        50   60
20 |—————|————|————————→ |25
```

Low Estimate   Place your best estimate on the number line and label   High Estimate

```
  7
  18
 x 9
 ———
 162      3x6=18
```

Any observations made after seeing the second video?

3 sugar cubes wide and 6 sugar cubes long.

```
  18
 x11
 ———
  18
 180
 ———
 198
```

Use this area for work, tables, calculations, sketches, to find the final solution-

16)62 00

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

Three Act Task Recording Sheet: Sugar Cubes

_D-19_

Act 1

What questions come to your mind as a mathematician when seeing this video?

What is the volume of the box?

How many cubes of sugar are there?

How much does each cube cost?

How much sugar is in each sugar cube? How many calieris is there.

How much does the box of sugar cubes cost?
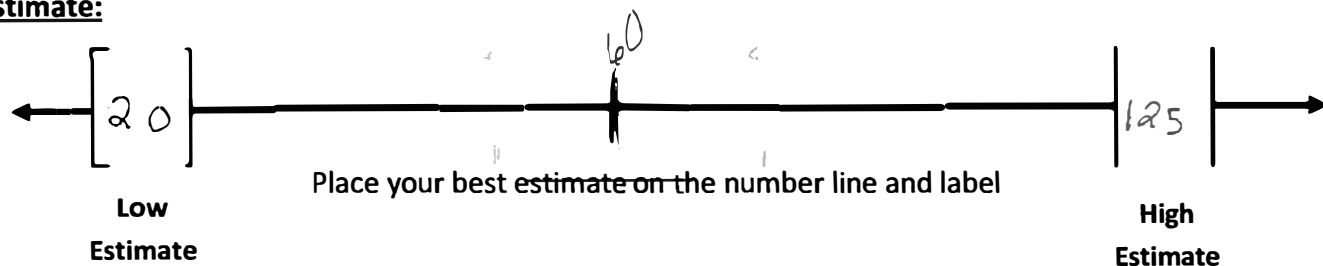
How many groups of 4ths are there?

Main Focus Question _How many sugar cubes are in the box?_

Act 2

What information would you like to know or need to know to solve the problem?

How much volume is in each sugar cube. (L×W×H)

How much volume is in the box. (L×W×H)

Estimate:

20   60   125

Place your best estimate on the number line and label

Low Estimate   **High Estimate**

$3 \times 6 = 18$

Any observations made after seeing the second video?

3 sugar cubes wide and 6 cubes long.

$\begin{array}{r} 18 \\ \times 9 \\ \hline 162 \end{array}$ $3 \times 6 \times 9$ 162 cubes?

Use this area for work, tables, calculations, sketches, to find the final solution-
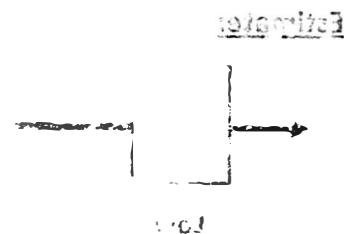
$3 \times 6 \times 11$

162

$$
\begin{array}{r}
18 \\
\times 11 \\
\hline
18 \\
+180 \\
\hline
198
\end{array}
$$

Act 3

Record any new information provided and calculate the final solution. Please be sure to label clearly.

What was the final result?

_____ \

___

What questions come to your mind as a mathematician when seeing this video?

How many calories?
How many groups of 4ths are there?
What is the volume of the box?
How much sugar is in each sugar cube?
How much does each sugar cube cost?
How many ingredients are in the sugar?
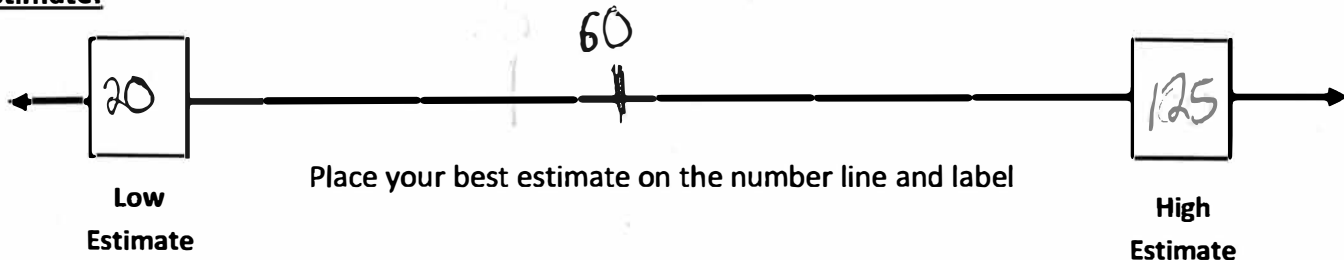How much does the box of sugar cubes cost?

Main Focus Question How many sugar cubes are in the entire box?

Act 2

What information would you like to know or need to know to solve the problem?

How much sugar is in a sugar cube? (LxWxH)
How much volume is in the box?

Estimate:

60

20 — Low Estimate

Place your best estimate on the number line and label

125 — High Estimate

Any observations made after seeing the second video?

3 sugar cubes wide and 6 sugar cubes long. 3 x 6 = 18

$$\begin{array}{r} 18 \\ \times\ 9 \\ \hline 162 \end{array}$$ $$\begin{array}{r} 18 \\ \times\ 11 \\ \hline 18 \\ 18 \\ \hline 180 \end{array}$$ 11 sugar cubes heigh