Centre Tasks

**Number**

**Unit 3 Line Master 12a**

**Centre A: The Garden   
(Representing Fractions)**

The residents of an apartment building decided   
to make a rectangular community garden.   
Their design is shown below.   
The walkway is part of the garden.  
What fraction of the garden does each type of vegetable cover? Explain.

Table

Description automatically generated

Centre Tasks (cont’d)

**Number**

**Unit 3 Line Master 12b**

**Centre B: Planting Seeds  
(Comparing Fractions)**

Seeds come in small packages, with different numbers of seeds in each, depending on the type of vegetable.

This table shows the fraction of the garden each package   
of seeds will cover.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Vegetable** | Lettuce | Tomatoes | Corn | Peppers | Cucumbers | Beans |
| **Fraction of garden covered with 1 package of seeds** |  |  |  |  |  |  |

Use the fractions you identified in Centre A.

Determine how many packages of each seed   
the gardeners should buy.

Centre Tasks (cont’d)

**Number**

**Unit 3 Line Master 12c**

**Centre C: Tending to the Garden  
(Working with Percents)**

These tasks need to be completed daily to maintain the garden.

|  |  |
| --- | --- |
| **Task** | **Time (h)** |
| Watering | 2 |
| Weeding | 4 |
| Fertilizing | 0.5 |
| Pruning | 1 |
| Maintenance of Walkway | 1 |
| Picking/Cleaning Crop | 1.5 |

The gardeners want to divide up the tasks equally.   
To do this, they would like a visual that shows   
each time as a percent of the total daily time: 10 h.

Create a visual to help the gardeners.

Centre Tasks (cont’d)

**Number**

**Unit 3 Line Master 12d**

**Centre D: Harvesting Vegetables  
(Fractions of a Set)**

One day in mid-August, 24 vegetables were harvested   
from the garden.  
Here is the harvest:



· Show each type of vegetable as a fraction of the whole harvest   
for that day.

· Order the fractions from least to greatest.

· Create a visual to show the harvest.  
Partition the rectangle to show the harvest   
of each type of vegetable.

|  |  |  |
| --- | --- | --- |
|  | **Today’s Harvest** |  |
|  |  |  |
|  |  |  |

Centre Tasks (cont’d)

**Number**

**Unit 3 Line Master 12e**

**Centre E: Recording Temperatures  
(Interpreting Integers)**

The gardeners recorded the temperatures daily.  
This table shows the temperatures for the first 10 days of May.

|  |  |  |
| --- | --- | --- |
| **Date** | **Daytime High (°C)** | **Nighttime Low (°C)** |
| May 1 | 15 | −3 |
| May 2 | 12 | −7 |
| May 3 | 23 | 4 |
| May 4 | 24 | 15 |
| May 5 | 23 | 10 |
| May 6 | 29 | 16 |
| May 7 | 28 | 8 |
| May 8 | 15 | −4 |
| May 9 | 19 | 0 |
| May 10 | 17 | −1 |

· Which day had the coldest daytime temperature?

· Which day had the coldest nighttime temperature?

· Frost is possible any time the nighttime temperature   
drops to 4°C or lower.  
For which dates was there a risk of frost?

· Order the nighttime temperatures from highest to lowest.

Centre Tasks (cont’d)

**Number**

**Unit 3 Line Master 12f**

**Centre F: Applying Fertilizer**

**(Relating Fractions, Decimals, and Percents)**

The gardeners want to use an organic fertilizer   
that is high in nitrogen and low in potash.   
Here are their options.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Natural Nutrients  Fertilizer**  Nitrogen:  Phosphate:  Potash: |  | **Greener Growers  Fertilizer**  Nitrogen: 0.15  Phosphate: 0.2  Potash: 0.05 |  | **Perfect Plants  Fertilizer**  Nitrogen: 5%  Phosphate: 10%  Potash: 5% |

· Which fertilizer best matches their needs?

· For the chosen fertilizer, express the value of each chemical as:

– a fraction

– a decimal

– a percent

· Identify the fertilizer that has the most phosphate.   
Show your thinking.

Centre Tasks (cont’d)

Answers

**Number**

**Unit 3 Line Master 12g**

**Centre A:**Lettuce: or ; Tomatoes: or ; Corn: or ;

Cucumbers: or ; Peppers: ; Beans: or

**Centre B:**Lettuce: 1 package; Tomatoes: 2 packages; Corn: 1 package; Cucumbers: 1 package; Peppers: 1 package; Beans: 1 package

**Centre C:**Visual to show: Watering: 20%; Weeding: 40%; Fertilizing: 5%; Pruning: 10%; Maintenance of Walkway: 10%;

Picking/Cleaning Crop: 15%

**Centre D:**Tomatoes: , or ; Cucumbers: , or ; Lettuce: , or ; Peppers: ;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Today’s Harvest** | | |  |
|  | T | T | T |  |
| T | T | T |
| T | T | T |
| T | C | C |
| C | C | C |
| C | L | L |
| L | P | P |
| P | P | P |
|  |  | | |  |

Least to greatest: , , ,

Centre Tasks (cont’d)

Answers

**Number**

**Unit 3 Line Master 12h**

**Centre E:**May 2; May 2; May 1, May 2, May 3, May 8, May 9, May 10;   
16, 15, 10, 8, 4, 0, −1, −3, −4, −7

**Centre F:** Natural Nutrients Fertilizer; Nitrogen: , 0.2, 20%; Phosphate: , 0.1, 10%; Potash: ; 0.05, 5%; Greener Growers Fertilizer; 20%.