

**Name**

**Date**

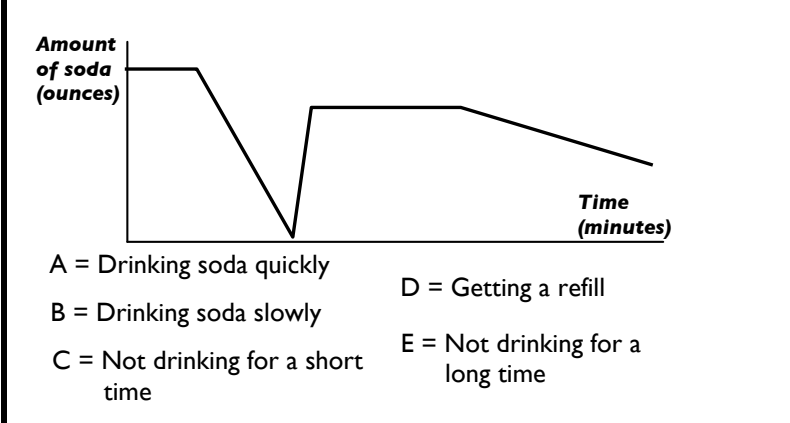
**Objectives**  
 1) Understand a linear graph  
 2) Find rates of change on a graph

**Numeracy Skill Builder:** Long division, decimal remainders

Divide, writing any remainders as decimals.

$6 \overline{)219}$        $8 \overline{)426}$        $5 \overline{)201}$

**Concept 1:** Understand a linear graph



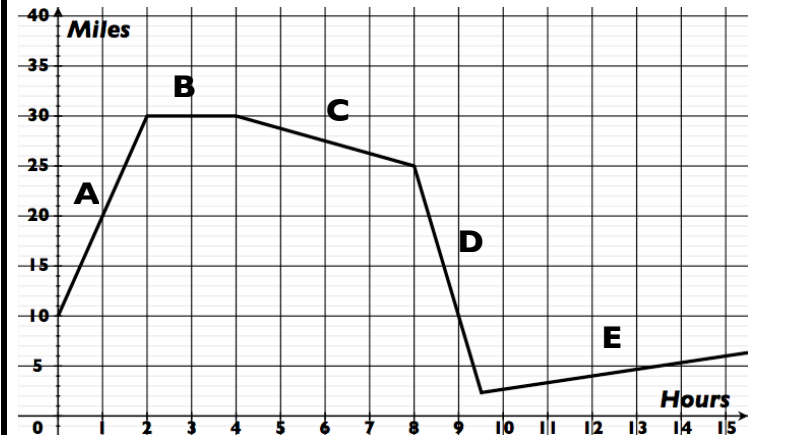
**Directions:** Label each section of the graph with the correct letter.

**Basic:** At least 3 labels correct

**Proficient:** All 5 labels correct

**Advanced:** All 5 labels correct, and determine if each section of the graph has a positive, negative, or zero rate of change.

**Concept 2:** Find rates of change on a graph



**Directions:** Find the rate of change of each section of the graph. Include units in your answers.

**Basic:** Do sections A and B

**Proficient:** Do sections A, B, and C

**Advanced:** Do sections D and E.

**Test Prep**

If John got paid 34 dollars in 4 hours, how much money will he have earned after 7 hours?

**A**     \$48.25  
**B**     \$52.50  
**C**     \$56.75  
**D**     \$59.50

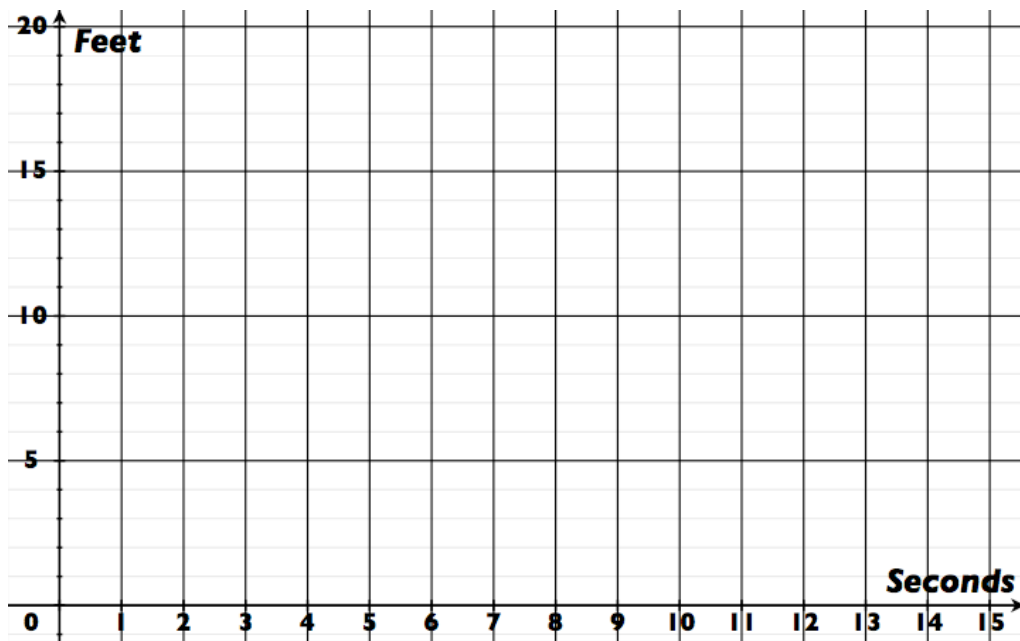
**Work / Explanation**

**Main Concept**

**Data Table:**

Seconds	Feet
0	0
1	5
2	10
3	15
4	16.25
5	17.5
6	18.75
7	20
8	20
9	20
10	16
11	12
12	8
13	4
14	0

**Graph:**



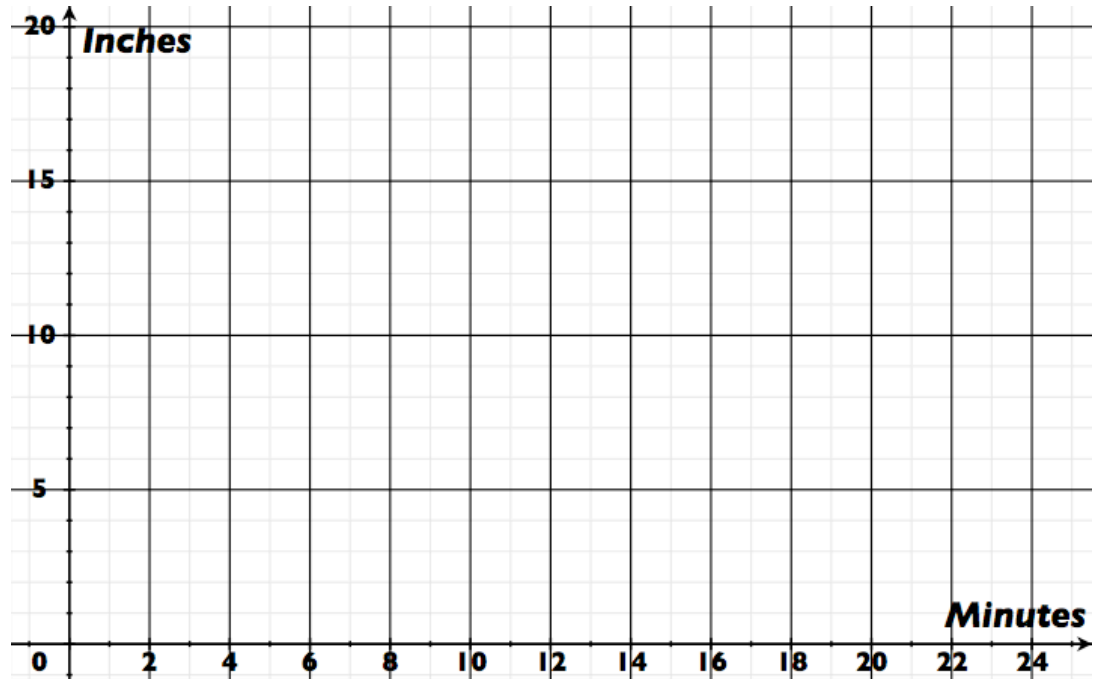
**Workspace for calculating Rates of Change:**

**Interpret the graph:** When is the Hare...

1. running fastest? \_\_\_\_\_ running slowest? \_\_\_\_\_
2. not moving at all? \_\_\_\_\_
3. running **away** from the starting line? \_\_\_\_\_ running **toward** the starting line? \_\_\_\_\_

**Basic Level: Bath Time**

Time (minutes)	Water Level (inches)
0	0
1	1.5
2	3
3	4.5
4	6
5	7.5
6	9
7	18
8	18
9	18
10	18
11	18
12	9
13	9
14	9
15	18
16	18
17	18
18	18
19	18
20	18
21	18
22	9
23	6
24	3
25	0



**Workspace:**

1. Make a **graph** of this data.
2. Find the **rate of change** of each section of the graph. Include units.
3. Write a short story that is represented by this graph. **Each section** of the graph must be explained.

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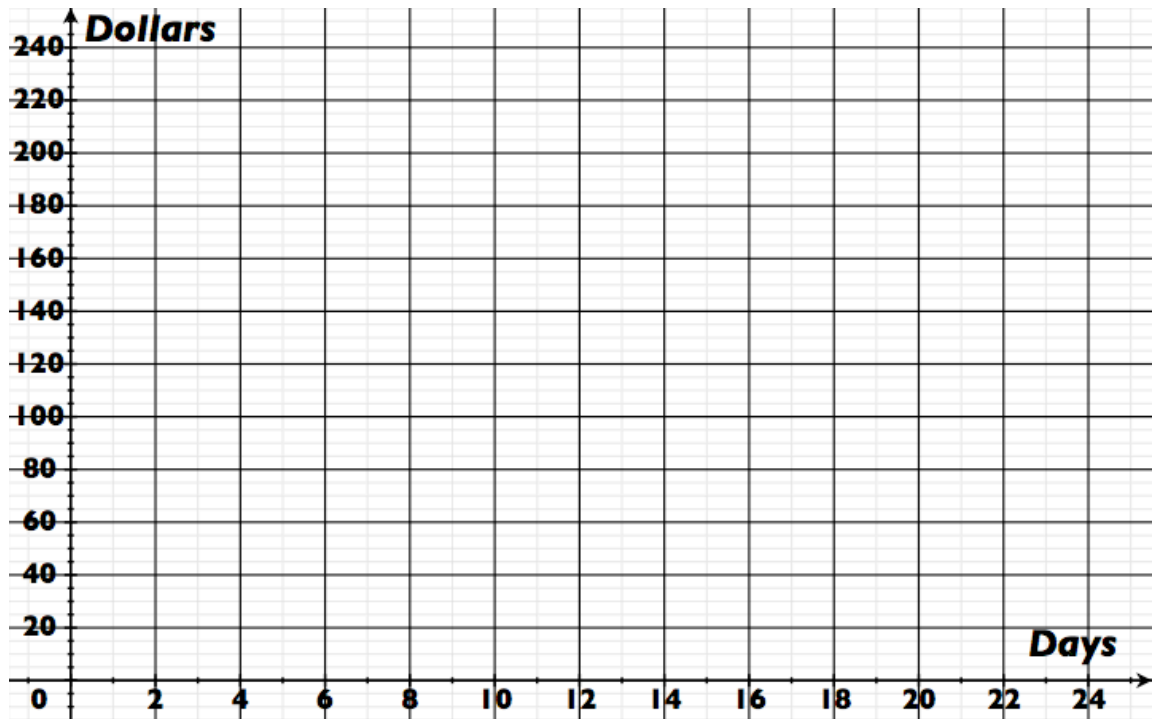
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## Proficient Level: Cash Flow

Time (days)	Money (dollars)
0	50
1	60
2	70
3	80
4	90
5	100
6	100
7	100
8	140
9	180
10	160
11	120
12	0
13	15
14	30
15	45
16	60
17	75
18	90
19	105
20	130
21	155
22	180
23	205
24	230
25	230



**Workspace:**

1. Make a **graph** of this data.
2. Find the **rate of change** of each section of the graph. Include units.
3. Write a short story that is represented by this graph. **Each section** of the graph must be explained.

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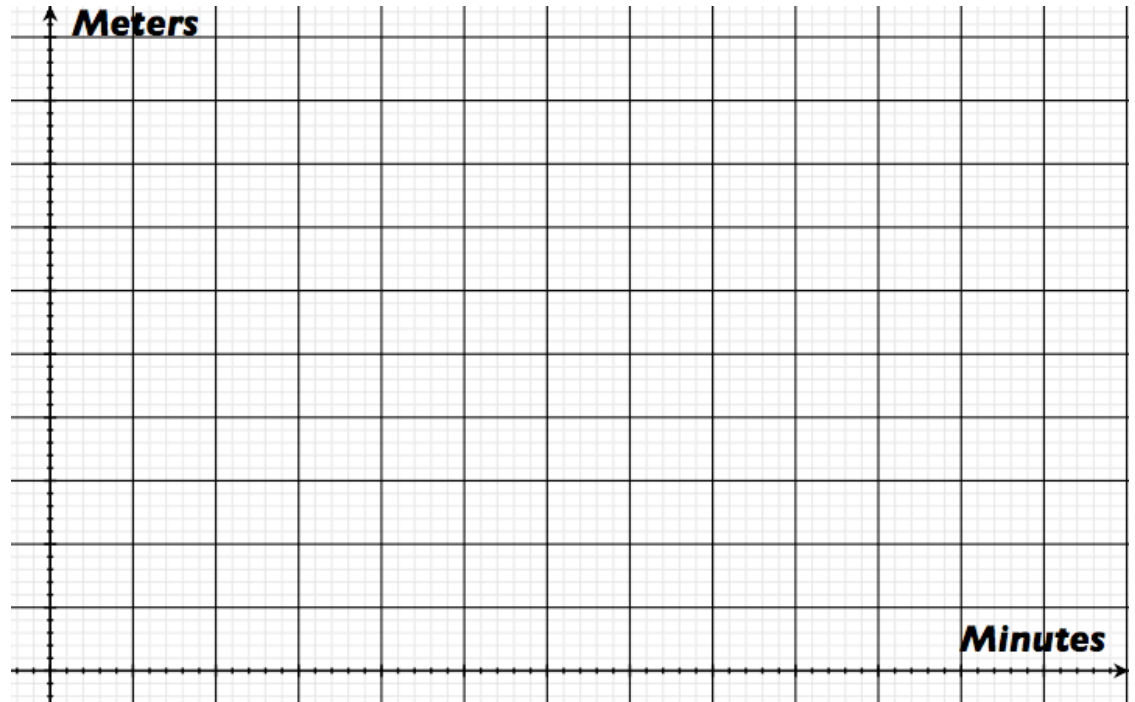
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## Advanced Level: Mountain Climber

Time (Minutes)	Height (Meters)
0	120
5	160
10	200
15	240
20	280
25	280
30	280
35	280
40	360
45	440
50	520
55	600
60	720
65	840
70	960
75	960
80	960
85	960
90	960
95	960
100	800
105	640
110	480
115	320
120	160
125	0



**Workspace:**

1. Make a **graph** of this data. *You first need to figure out a good **scale** for the axes.*
2. Find the **rate of change** of each section of the graph. Include units.
3. Write a short story that is represented by this graph. **Each section** of the graph must be explained.

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