Unit 3 Lesson 3
8th Grade

Practice 3.3: Graph lines using a point and a slope

For #1-6, read the situation and create a graph.

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<table>
<thead>
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<tr>
<td>1. You get a job and steadily put $20 into your savings account each week. After 3 weeks, you have $100.</td>
<td>2. A line has a slope of (\frac{3}{1}) and passes through the point (1, -5).</td>
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<td><img src="image" alt="Savings Money Graph" /></td>
<td><img src="image" alt="Graph" /></td>
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<td>3. You have $150 in savings. You get a new puppy and must spend $10 every 3 weeks on food.</td>
<td>4. A line has a slope of (\frac{3}{4}) and passes through the point (-5, 0).</td>
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<td><img src="image" alt="Spending Money Graph" /></td>
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5. A line has a slope of -5 and passes through the point (-4, 6).

6. A line has a slope of 0 and passes through the point (-2, 3).

7. Graph and label each of these situations on the grid to the right.

Line a: You have $20 in your Salvation Army bucket and earn $1 each hour ringing the bell.

Line b: You have $20 in your Salvation Army bucket and earn $3 each hour ringing the bell.

Line c: You have $20 in your Salvation Army bucket, but don’t earn any more money ringing the bell.

*Which line is steepest?

*Which rate of change is greatest?

Review. Let x = #hours and let y = dollars collected.

*Write an equation for line a:

*Write an equation for line b:

*Write an equation for line c:
8. **Graph and label** each of these situations on the grid to the right.

**Line a:** You have $20 in your Salvation Army bucket and earn $1 each hour ringing the bell.

**Line b:** You have $5 in your Salvation Army bucket and earn $1 each hour ringing the bell.

**Line c:** You have no money in your Salvation Army bucket, but earn $1 each hour ringing the bell.

*Which line is steepest? None, the same

*Which rate of change is greatest?  

Review. Let \( x = \) #hours and let \( y = \) dollars collected.

*Write an equation for line a:  
\[
 y = x + 20 
\]

*Write an equation for line b:  
\[
 y = x + 5 
\]

*Write an equation for line c:  
\[
 y = x 
\]