11. Consider the following sets: \( A = \{2, 5, 6, 8, 10, 11\} \), \( B = \{2, 10, 18\} \) and \( C = \{10, 11, 14\} \). What is the greatest number in either of sets \( B \) or \( C \) that is also in set \( A \)?

12. The temperature is now 0 °F. For the past 12 hours, the temperature has been decreasing at a constant rate of 3 °F per hour. What was the temperature 8 hours ago?

13. What is the value of \( x \) if \( \frac{1}{x} + \frac{1}{2x} = \frac{1}{2} \)?

14. In June, Casey counted the months until he would turn 16, the minimum age at which he could obtain his driver’s license. If the number of months Casey counted until his birthday was 45, in what month would Casey turn 16?

15. It takes 1 gallon of floor wax to cover 600 sq ft. If floor wax is sold only in 1-gallon buckets, how many buckets of floor wax must be purchased to wax the floors of three rooms, each measuring 20 feet by 15 feet?

16. Consider the pattern below:
   \[
   22^2 = 121 \times (1 + 2 + 1) \\
   333^2 = 123,211 \times (1 + 2 + 3 + 2 + 1) \\
   4444^2 = 1,234,321 \times (1 + 2 + 3 + 4 + 3 + 2 + 1)
   \]
   For what positive value of \( n \) will \( n^2 = 12,345,654,321 \times (1 + 2 + 3 + 4 + 5 + 6 + 5 + 4 + 3 + 2 + 1) \)?

17. If United States imports increased 20% and exports decreased 10% during a certain year, the ratio of imports to exports at the end of the year was how many times the ratio at the beginning of the year? Express your answer as a common fraction.

18. James needs $150 to buy a cell phone. In January, he saved $5. He saved twice as much in February as he saved in January, for a total savings of $15. If James continues to save twice as much each month as he saved in the previous month, in what month will his total savings be enough to purchase the cell phone?

19. What is the perimeter of \( \triangle ADE \) shown here?

20. The following table shows the results of a survey of a random sample of people at a local fair. If there are 1100 people at the fair, how many females would you expect to prefer the Flume?

<table>
<thead>
<tr>
<th>Favorite Ride</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferris Wheel</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Roller Coaster</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Carousel</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Flume</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>