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**Worksheet E-1**  
**Translating Expressions / Inductive Reasoning**

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**Unit E**

Write each phrase as an algebraic expression.

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| <p>1. fifteen increased by <math>t</math></p> <p>2. five years older than Luis</p> <p>3. nine dollars less than <math>j</math></p> <p>4. a number less six</p> <p>5. the product of <math>r</math> and <math>8</math></p> <p>6. twice as many oranges</p> <p>7. Emily's age divided by <math>3</math></p> | <p>8. A number divided by <math>-12</math></p> <p>9. <math>7</math> less than <math>m</math></p> <p>10. the quotient of <math>3</math> and <math>y</math></p> <p>11. the total of <math>5</math> and <math>c</math></p> <p>12. the difference of <math>6</math> and <math>r</math></p> <p>13. <math>n</math> divided by <math>2</math></p> <p>14. the product of <math>k</math> and <math>9</math></p> |
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Write each sentence as an algebraic equation.

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| <p>15. The sum of a number and four is <math>-8</math>.</p> <p>16. Ten times the number of students is <math>280</math>.</p> <p>17. Ten inches less than her height equals <math>26</math>.</p> <p>18. Seven more than twice his age is <math>51</math>.</p> | <p>19. Twice as many points as Bob would be <math>18</math> points.</p> <p>20. After dividing the money <math>5</math> ways, each person got <math>\\$67</math>.</p> |
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**Find the pattern in each sequence, name the next 3 numbers, and state the rule for finding the next numbers in the sequence.**

**1)** 18, 23, 28, 33, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

**2)** 3, 6, 12, 24, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

3) 1, 3, 9, 27, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

Find the pattern and name the next three numbers.

4) 4, 5, 7, 10, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) 5, 10, 20, 40, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6)  $\frac{1}{10}, \frac{1}{20}, \frac{1}{30},$  \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

7) 0, -2, 4, -6, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

8)  $\frac{1}{2}, \frac{3}{4}, \frac{5}{6},$  \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

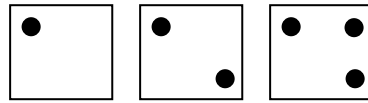
9) 5.8, 5.6, 5.4, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

10) 6, 7, 14, 15, 30, 31, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

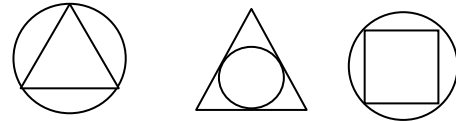
11) -33, -44, -55, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Draw the next figure in the pattern.

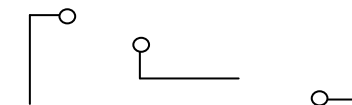
12)



13)



14)



15)

