## Algebraic Expressions in Patterns Worksheet

Name $\qquad$ Date $\qquad$
Continue each pattern with the next two numbers.

1. $7,14,8,16,10,20,14$, $\qquad$ , $\qquad$

2. $11,13,16,20,25,31,38$, $\qquad$
$\qquad$
Use the pattern below for questions 3-5.

$$
3,8,13,18,23 \ldots
$$

3. What are the next two terms in the sequence?
4. Create a table to determine the algebraic expression for this sequence.
5. What would the $20^{\text {th }}$ term be in this sequence?

Use the pattern below for questions 6-8.

$$
6,13,20,27, \ldots . .
$$

6. What are the next two terms in the sequence?
7. Create a table to determine the algebraic expression for this sequence.
8. What would the $15^{\text {th }}$ term be in this sequence?
9. Look for a pattern. Give the rule for the table that tells the relationship between $x$ and $y$.

| $x$ | 2 | 4 | 6 | 8 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | 10 | 16 | 22 | 28 | 31 |

A. Multiply X by 10 to get Y
B. Multiply X by 2 ; then subtract 1
C. Multiply X by 3 ; then add 4
D. Multiply X by 5
10. Look for a pattern. Give the rule for the table that tells the relationship between a and b.

| a | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{b}$ | 2 | 4 | 6 | 8 | 10 |

A. $b=a-2$
B. $b=a-1$
C. $b=2 a$
D. $b=3 a-6$
11. If the bells at Texas Middle School ring at $7: 55,8: 40,9: 25,10: 10$... Explain how you can find when the next bell will ring.

