Extra Practice Sec. 10.1, 10.2 & 10.5

Find the first four terms for each sequence.

1. $a\_{1}=2$ 2. $a\_{1}=2$

$a\_{n}=5-2a\_{n-1}$ $a\_{n}=2^{n-1}+1$

Write a possible explicit rule for the nth  term of each sequence.

1. 6, 11, 16, 21, 26, … 4. $\frac{1}{3}, \frac{2}{4}, \frac{3}{5}, \frac{4}{6}, \frac{5}{7}, …$

Write the explicit rule for:

5. 3+5+7+9+… 6. Simplify: $\frac{n!(n-3)!}{(n+1)!(n-5)!}$

Find the 9th term of the arithmetic sequence:

7. 21, 32, 43, 54, 65, …

8. Expand using Pascal’s Triangle: $(2x-5y)^{4}$

Find the 9th term of the arithmetic sequence.

9. $a\_{4}=5$ $a\_{6}=11$

10. Find the binomial coefficient using: $\_{12}C\_{5}$

Find the indicated Sum. For the Arithmetic series:

11. $S\_{13} for 4+7+10+13+…$

Find the missing term of the arithmetic sequence.

12. $14, \overline{}, \overline{}, 23$

 Answers: Extra Practice 10.1, 10.2, and 10.5

1. 2, 1, 3, -1 2) 2, 3, 5, 9 3) $a\_{n}=5n+1$ 4) $a\_{n}=\frac{n}{n+2}$ 5) $S\_{n}=2n+1$ or $\sum\_{n=1}^{\infty }2n+1$ 6) $\frac{\left(n-3\right)\left(n-4\right)}{n+1}$ 7) $a\_{9}$=109

8) $16x^{4}-160x^{3}y+600x^{2}y^{2}-1000xy^{3}+625y^{4}$ 9) $a\_{9}$=20 10) 792 11) $S\_{13}=286$ 12) 17, 20