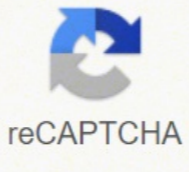




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Properties of Exponents
Simplify. Your answers should contain only positive exponents.

1) $2a^3 \cdot 3a^2 = 6a^5$

2) $a^3 \cdot 2a^3 = 2a^6$

3) $a^3 \cdot 2a^2 = \frac{2}{a}$

4) $a^3 \cdot 2a^4 = 8a$

5) $3a^2 \cdot 4a = 12a^3$

6) $2a^2 \cdot 3a^3 = 6a^5$

7) $2a^3 \cdot 3a = 6a^4$

8) $a^3 \cdot a^2 = 4a^5$

9) $a^3 \cdot 2a^2 = \frac{2a}{ab}$

10) $a^3 \cdot a^2 = \frac{x^4}{y^2}$

11) $(a^2)^3 = 1$

12) $(a^2)^3 = \frac{1}{16a^6}$

13) $(a^2)^3 = 25a$

14) $(a^2)^3 = 16a^6$

15) $(a^2)^3 = 81k^9$

16) $(a^2)^3 = \frac{1}{4xy}$

Kuta Software - Infinite Algebra 2
Introduction to Sequences

Find the next three terms in each sequence.

1) 1, -3, 9, -27, 81, ...

2) 9, 109, 209, 309, 409, ...

3) 0, 3, 8, 15, 24, ...

4) $\frac{1}{2}, \frac{1}{2}, \frac{3}{8}, \frac{1}{4}, \frac{5}{32}, \dots$

5) 4, 16, 36, 64, 100, ...

6) 14, 34, 54, 74, 94, ...

7) $5, \frac{5}{2}, \frac{5}{4}, \frac{5}{8}, \frac{5}{16}, \dots$

8) -9, 101, -999, 10001, -99999, ...

Find the tenth term in each sequence.

9) $-1, \frac{2}{3}, \frac{7}{3}, 4, \frac{17}{3}, \dots$

10) 7, 9, 12, 16, 21, ...

11) -2, -6, -18, -54, -162, ...

12) -23, -18, -13, -8, -3, ...

13) -4, 12, -36, 108, -324, ...

14) -6, -2, 0, 1, $\frac{3}{2}, \dots$

15) -28, 172, 372, 572, 772, ...

16) 37, 46, 55, 64, 73, ...

Find the first four terms in each sequence.

17) $a_n = \frac{2n+1}{n^2}$

18) $a_n = 3^{n-1}$

19) $a_n = n^2 + 1$

20) $a_n = \frac{n^2}{2n+1}$

Introduction to Sequences
Arithmetic and Geometric Sequences
Finding explicit formulas

1) $a_n = 3n - 2$

2) $a_n = 2n + 1$

3) $a_n = 4n - 1$

4) $a_n = 5n + 2$

5) $a_n = 6n - 3$

6) $a_n = 7n + 4$

7) $a_n = 8n - 5$

8) $a_n = 9n + 6$

9) $a_n = 10n - 7$

10) $a_n = 11n + 8$

11) $a_n = 12n - 9$

12) $a_n = 13n + 10$

13) $a_n = 14n - 11$

14) $a_n = 15n + 12$

15) $a_n = 16n - 13$

16) $a_n = 17n + 14$

17) $a_n = 18n - 15$

18) $a_n = 19n + 16$

19) $a_n = 20n - 17$

20) $a_n = 21n + 18$

Algebra 1
Simplifying Radicals with Variables

1) $\sqrt{18} = 3\sqrt{2}$

2) $\sqrt{27} = 3\sqrt{3}$

3) $\sqrt{48} = 4\sqrt{3}$

4) $\sqrt{75} = 5\sqrt{3}$

5) $\sqrt{98} = 7\sqrt{2}$

6) $\sqrt{128} = 8\sqrt{2}$

7) $\sqrt{162} = 9\sqrt{2}$

8) $\sqrt{200} = 10\sqrt{2}$

9) $\sqrt{252} = 14\sqrt{7}$

10) $\sqrt{300} = 10\sqrt{3}$

11) $\sqrt{363} = 3\sqrt{121}$

12) $\sqrt{400} = 20$

13) $\sqrt{450} = 15\sqrt{2}$

14) $\sqrt{500} = 10\sqrt{5}$

15) $\sqrt{567} = 21\sqrt{3}$

16) $\sqrt{600} = 10\sqrt{6}$

17) $\sqrt{648} = 18\sqrt{2}$

18) $\sqrt{700} = 10\sqrt{7}$

19) $\sqrt{750} = 15\sqrt{10}$

20) $\sqrt{800} = 20\sqrt{2}$

