

EXTRA PRACTICE - Exercises

Copyright © 2003 by Videotext *Interactive*

Unit I – The Structure of Mathematics

Part A – Mathematics as a Language

Lesson 2 – Mathematical Expressions

Tell whether each of the following expressions is an open phrase, closed phrase, open sentence, or closed sentence.

1. $\sqrt{x} + 3 = 7$

2. $30 - 5 \div 5$

3. $5 + 8$ 14

4. $\frac{5n}{4} + 3$

5. $y - 2 > 7$

6. $2 + 6$ $3 + 4$

7. $15 - 2$ $7 + 6$

8. $\frac{1}{3}n = 6$

9. $-3a^2$

10. $5(9) - 12 = 17$

In the following exercises, take the appropriate mathematical action with each expression. For open phrases, use $\{0,2,4\}$ for the domain. For open sentences, use $\{\text{multiples of } 4\}$ for the replacement set.

11. $\sqrt{x} + 3 = 7$

12. $30 - 5 \div 5$

13. $5 + 8$ 14

14. $\frac{5n}{4} + 3$

15. $y - 2 > 7$

16. $2 + 6$ $3 + 4$

17. $15 - 2$ $7 + 6$

18. $\frac{1}{3}n = 6$

19. $-3a^2$

20. $5(9) - 12 = 17$

EXTRA PRACTICE — Answer Key

Copyright © 2003 by Videotext *Interactive*

Unit I – The Structure of Mathematics Part A – Mathematics as a Language Lesson 2 – Mathematical Expressions

Tell whether each of the following expressions is an open phrase, closed phrase, open sentence, or closed sentence.

1. Open Sentence
2. Closed Phrase
3. Closed Sentence
4. Open Phrase
5. Open Sentence
6. Closed Sentence
7. Closed Phrase
8. Open Sentence
9. Open Phrase
10. Closed Sentence

In the following exercises, take the appropriate mathematical action with each expression. For open phrases, use $\{0, 2, 4\}$ for the domain. For open sentences, use $\{\text{multiples of } 4\}$ for the replacement set.

11. $\{16\}$
12. 29
13. True
14. Range is $\{3, 1\frac{1}{2}, 8\}$
15. Solution Set is $\{12, 16, 20, \dots\}$
16. False
17. 7
18. $\frac{1}{3}$ of 18 is 6. 18 is not a multiple of 4. Solution Set is $\{ \}$
19. Range is $\{0, -12, -48\}$
20. False