# Chapter P Exercises

1. Rational
2. Irrational
3. Origin
4. Absolute Value
5. Composite
6. Prime
7. Variables, Constants
8. Terms
9. Coefficients
10. Zero-Factor Property
11. (a) (b) (c) (d) (e)
12. (a) (b) (c) (d) (e)
13. (a) (b) (c) (d) (e)
14. (a) (b) (c) (d) (e)
15. (a) (b) (c) (d) (e)
16. (a) (b) (c) (d) (e)
17. skip
18. skip
19. (a) is less than or equal to (b) skip (c) unbounded
20. (a) is greater than or equal to (b) skip (c) unbounded
21. (a) is less than (b) skip (c) unbounded
22. (a) is greater than (b) skip (c) unbounded
23. (a) a set of numbers greater than or equal to (b) skip (c) unbounded
24. (a) a set of numbers less than (b) skip (c) unbounded
25. (a) is greater than and less than (b) skip (c) bounded
26. (a) is greater than or equal to and less than or equal to (b) skip (c) bounded
27. (a) is greater than or equal to and less than (b) skip (c) bounded
28. (a) is greater than and less than or equal to (b) skip (c) bounded
29. (a) a set of numbers greater than or equal to and less than (b) skip (c) bounded
30. (a) a set of numbers greater than and less than or equal to (b) skip (c) bounded
31. Variables : , Constants : , Coefficients :
32. Variables : , Constants : , Coefficients :
33. Variables : , Constants : , Coefficients :
34. Variables : , Constants : , Coefficients :
35. Variables : , Constants : , Coefficients :
36. Variables : , Constants : , Coefficients :
37. (a) (b)
38. (a) (b)
39. (a) (b)
40. (a) (b)
41. (a) Division by Zero (b)
42. (a) (b) Division by Zero
43. Associative Property of Addition
44. Multiplicative Inverse Property
45. Multiplicative Inverse Property
46. Additive Inverse Property
47. Distributive Property
48. Additive Identity Property
49. Distributive Property and Multiplicative Identity Property
50. Distributive Property
51. Associative Property of Addition
52. Associative Property of Multiplication
53. Distributive Property
54. Associative Property of Multiplication and Multiplicative Inverse Property
55. (a) Negative (b) Negative
56. (a) Positive (b) Positive
57. (a) (b) it gets infinitely bigger?
58. (a) (b) it approaches
59. True, is any positive number, is any negative number, however is any positive number, ergo, the result of has to be a positive number.
60. False, is any positive number, is any negative number, a positive number multiplied by a negative number will always result with a negative number, ergo .
61. False, bigger denominator means smaller value, ergo .
62. False, Fractions may only Add or Subtract with Like Denominators. satisfies that condition, whereas does not.
63. (a) No, the expressions will equal only if both and have the same sign (Positive or Negative), and not equal to each other if and have different signs from each other. (b) Yes, if the two expressions are not equal, that means precisely one of and is a negative number, which means will always be an absolute value of the result from a subtraction, whereas will always be an addition of two positive numbers.
64. Yes, Nonnegative means any number greater than or equal to . Positive means any number greater than . In other words, (nonnegative) is not the same thing as .
65. Yes, is an even prime number because it is divisible by 1 and itself.
66. No, because a number cannot be both repeating and non-repeating.
67. Yes, if and only if . Otherwise, no. Absolute value of a number is the distance between the number and the origin, and it will never be a negative value due to the fact that it is a distance without direction.
68. I don't want to.