Nathan Paxton

Discrete Math TR 12:30

Homework 2.1

12. { 5, 6, 7, 8, 9, 10, 11, 12, 13 }

13. { 6, 7, 8, 9, 10, 11, 12, 13, 14 }

28. { 2, 4, 6, 8, … }

29. { 1, 3, 5, 7, 9, 11, … }

36. { 6, 12, 18 }

37. { 1, ½, 1/3, ¼, 1/5, 1/6, 1/7, … }

43. n(A) = 8

67. False

68. True

87. { 1, 2 }, { 3, 4, 5 }

88. Impossible. If they are equal, they must contain identical elements and would therefore be equivalent.

89. { 3, 4, 5 }, { p, q, r }

90. { 1, 2 }, { 1, 2 }

1. D

2. A

3. B

4. C

5. ⊈

6. ⊈

7. ⊆

8. ⊆

21. True

22. False

23. False

24. True

25. True

26. False

27. False

28. True

29. True

30. False

31. False

35. False

36. True

51. 32

52. 16

53. 8

54. 4

55. 2

56. 1

57. 63

7. { a, c }

8. { a, b, c, e, g }

9. { a, b, c, d, e, f }

10. { b, c }

11. { b, d, f }

12. { d, e, f, g }

13. { d, f }

14. { b, d, f }

15. { a, b, c, e, g }

16. { a, b, c }

17. { e, g }

18. { b }

37. Not always true

38. Not always true

39. Always true

40. Not always true

49. { (d, p), (d, i), (d, g), (o, p), (o, i), (o, g), (g, p), (g, i), (g, g) }

50. {

51.

52.

53.

54.

55.

4. a. { 1 }

b. { 2 }

c. { 4 }

d. { 7 }

e. { 5 }

f. { 3 }

g. { 6 }

h. { 10 }

11.

12.

23. a. 0

b. 38

c. 40

1. B

2. D

3. A

4. C

5. F

6. E

25. Both

26. Equivalent

27. Equivalent

28. Equivalent

29. Both

30. Both

31.

32.