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Sets and Set Theory Worksheet 2

Name _____ Date _____

Use your knowledge of Sets and Set Theory to answer each question below.

1. In each problem, indicate set equality by writing = or ≠.

   a) A = {0, 2, 4, 6, 8, 10, 12} _____ B = {t, r, i, a, n, g, l, e}

   b) C = {a, e, i, o, u} _____ D = {vowels}

   c) X = {whole numbers ≤ 9} _____ Y = {8, 4, 5, 7, 2, 0, 6, 3, 1}

   d) P = {fingers} _____ Q = {thumb, index, middle, ring, little}

2. In each problem, indicate whether one set is a subset of the other by writing the symbols $\subset$ or $\not\subset$.

   a) A = {0, 2, 4, 6, 8, 10, 12} _____ B = {even numbers between 0 and 20}

   b) M = {consonants} _____ N = {a, b, c, d, e}

   c) X = {whole numbers < 7} _____ Y = {8, 4, 9, 5, 7, 2, 0, 6, 3, 1}

   d) C = {a, e, i, o, u} _____ D = {The English alphabet}

   e) R = {e, a, r} _____ S = {c, a, r, d}

   f) F = {-4, -3, -2, -1, 0, 1} _____ G = {integers < 7}

   g) P = {Saturday, Sunday} _____ Q = {Wednesday, Thursday, Friday, Saturday}

3. Create an example of two sets in which the first set is a subset of the second.

   _____

4. Create an example of two sets in which the first set is not a subset of the second.

   _____

5. How many subsets does each set have? Show your work.

   a) X = {0, 2, 4, 6} _____

   b) Q = {fingers} _____

   c) P = {primary colors} _____