

Name \_\_\_\_\_

Date \_\_\_\_\_

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

1. Circle all items below which are elements of set
- $X$
- , where
- $X = \{-8, -6, -4, -2, 0, 2, 4\}$
- .

 red   -6   a   2   9    $\frac{1}{2}$    n   -8    $-3\frac{1}{2}$ 

2. Circle all items below which are elements of set
- $Y$
- , where
- $Y = \{\text{vowels}\}$
- .

 c   -1   u    $\frac{1}{2}$    i   a   x   -3   e

3. Given
- $A = \{0, 2, 4, 6, 8, 10, 12\}$
- ,
- $B = \{t, r, i, a, n, g, l, e\}$
- and
- $C = \{-4, -3, -2, -1, 0, 1, 2, 3\}$
- , circle all statements below that are true.

 $s \notin B$     $16 \in A$     $4 \notin C$     $t \in A$     $-3 \in C$     $8 \notin A$ 

4. Label each set below as finite or infinite. If finite, list all elements.

a) {fingers} \_\_\_\_\_

b) {whole numbers} \_\_\_\_\_

c) {primary colors} \_\_\_\_\_

d) {prime numbers} \_\_\_\_\_

e) {days of the week} \_\_\_\_\_

6. Rewrite each set below using an ellipsis up to two times.

{integers} \_\_\_\_\_

{The English alphabet} \_\_\_\_\_

 {even whole numbers  $< 100$ } \_\_\_\_\_

{months of the year} \_\_\_\_\_

7. Give two original examples of a finite set. \_\_\_\_\_

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