

NAME: _____

NUMBER: _____

QUIZ over Section 3 in the 'CAT' book; 20 points.

1. (3 pts) Make a pair of PARENTHESES: _____
Make a pair of BRACES: _____
Make a pair of BRACKETS: _____
2. (2 pts) Let $W = \{2, 4, 6, 8, \dots\}$. Decide whether the following sentences are true, false, or sometimes true/sometimes false (ST/SF):
 - (a) $224 \in W$
 - (b) $\frac{1}{2} \in W$
 - (c) $\frac{20}{2} \in W$
 - (d) $n \in W$
3. (3 pts) For each sentence below, make a number line, and shade the value(s) of x that make the sentence true. Be careful to distinguish between hollow dots (numbers not included) and solid dots (numbers included).
 - (a) $x \in \{1, 2\}$
 - (b) $x \in (1, 2]$
 - (c) $x \notin (-\infty, 2)$
4. (6 pts) Classify each entry below as an expression or a sentence. If an expression, state whether it is a number or a set. If a sentence, state whether it is true, false, or ST/SF.
 - (a) $\{1, 2\}$
 - (b) $x \in [1, 2]$
 - (c) $1 \in (1, 2)$
5. (2 pts) List all the subsets of $\{c, d\}$. How many subsets are there?
6. (2 pts) Answer YES or NO, and JUSTIFY your answers to each of the following questions:
 - (a) Is $\{-0.4, \frac{1}{2}, 7\}$ a subset of \mathbb{R} ?
 - (b) Is $\{-0.4, \frac{1}{2}, 7\}$ a subset of the integers?
7. (2 pts) Describe each set shaded below, using either LIST or INTERVAL notation (whichever is appropriate).