

2 pts. 4. $A = \{-2, -1, 0, 1\}$ and $B = \{5, 7, 1\}$.

a. What is $A \cap B$?

$$\{1\}$$

b. What is $B - A$?

$$\{5, 7\}$$

c. TRUE or FALSE: $\{0, 1\} \subseteq (B \cap A)$ False

d. TRUE or FALSE: $|A \cup B| = 7$ False

Questions 5-7 are based on the following definitions:

$$f(x) = 2x^2$$

$$g(x) = x + 10$$

\mathbb{R} is the domain and co-domain for $f(x)$, and $g(x)$.

1 pt. 5. Which of the following properties describe the function $f(x)$?

injective

surjective

bijjective

none apply

1 pt. 6. Which of the following properties describe the function $g(x)$?

injective

surjective

bijjective

all apply

1 pt. 7. Let $k = f \circ g$. What is $k(2)$?

$$f(g(2)) = f(12) = 2(12^2) = 288$$