1. If $\dfrac{a-4}{28} = \dfrac{1}{4}$, then $a =$

(A) 11   (B) 10   (C) 7   (D) 6   (E) $\dfrac{3}{28}$

2. If the area of $\triangle ABC$ is 21, and the length of the height minus the length of the base equals 1, then the base of the triangle is equal to

(A) 1   (B) 2   (C) 4   (D) 6   (E) 7

3. If $d^2 = \sqrt{4} + d + 10$, then $d =$

(A) -2   (B) 2   (C) 3   (D) 4   (E) 16

4. If $\dfrac{4}{x-1} = \dfrac{x+1}{2}$, which of the following is a possible value of x?

(A) -1   (B) 0   (C) 1   (D) 2   (E) 3

5. The product of the digits of a two-digit number is 6. If the tens digit is subtracted from the units digit, the result is 5. What is the two-digit number?

(A) 61   (B) 32   (C) 27   (D) 23   (E) 16

6. If $16000 = 400(x+9)$, what is the value of x?

(A) 391   (B) 310   (C) 40   (D) 31   (E) 4

7. What is the radius of a circle with an area of $\dfrac{\pi}{4}$?

(A) 0.2   (B) 0.4   (C) 0.5   (D) 2   (E) 4

8. If 20 percent of x is 36 less than x percent of $x-70$, what is the value of x?

(A) 140   (B) 120   (C) 110   (D) 100   (E) 50

9. The dogs in a certain kennel are fed Brand A and Brand B dog food only. Of these dogs, 6 dogs eat Brand A and 15 dogs eat Brand B. If 4 of the dogs that eat Brand B also eat Brand A, how many dogs are in the kennel?

(A) 17   (B) 19   (C) 21   (D) 25   (E) 29