

PROBLEM SET 4: MORE PLUGGING IN THE ANSWER CHOICES

Easy

1

If $\frac{a-4}{28} = \frac{1}{4}$, what is the value of a ?

- A) 11
- B) 10
- C) 7
- D) 6

2



If the area of $\triangle ABC$ is 21, and the length of the height minus the length of the base equals 1, which of the following is equal to the base of the triangle?

- A) 2
- B) 4
- C) 6
- D) 7

3



If $d^2 = \sqrt{4} + d + 10$, what is the value of d ?

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

Medium

4



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

- A) -1
- B) 1
- C) 2
- D) 3

5

$$f(x) = \frac{1}{(x-3)^2 - 6(x-3) + 9}$$

For what value of x is the function f defined above undefined?

- A) -6
- B) -3
- C) 3
- D) 6

6



If $16,000 = 400(x + 9)$, what is the value of x ?

- A) 391
- B) 310
- C) 40
- D) 31

7



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

- A) 0.2
- B) 0.4
- C) 0.5
- D) 2.0

Hard

8



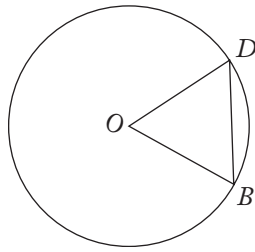
If 20 percent of x is 36 less than x percent of $x - 70$, what is the value of x ?

- A) 140
- B) 120
- C) 100
- D) 50

9

If $x^2 = y^3$ and $(x - y)^2 = 2x$, then which of the following is a possible value of y ?

- A) 64
- B) 16
- C) 8
- D) 4



In the circle with center O , $OD = DB$ and arc $DB = 2\pi$. What is the area of the circle?

- A) 36π
- B) 16π
- C) 12π
- D) 4π