

Detention Time
Practice Problems

1. A sedimentation basin in a treatment plant has a flow of 1.5 MGD (5,681.82 m³/day) flowing through it. The basin is 104ft (31.7m) long, 40ft (12.2m) wide and has depth of 8ft (2.4m). What is the detention time in hours?
 - A. 1.5 hours
 - B. 4 hours
 - C. 6.0 hours
 - D. 144.6 hours

2. A plant has 4 clarifiers. Each clarifier is 50ft (15.25m) in diameter with a depth of 10ft (3.05m). The plant has a flow of 5,446,999 gallons (20,632.57 m³/day) going through it. What is the detention time in hours?
 - A. 0.108 hours
 - B. 9.3 hours
 - C. 222.6 hours
 - D. 2.59 hours

3. A tank that measures 15ft (4.58m) in diameter and 50ft (15.25m) high has a flow of 1MGD (3,787.88 m³/day) flowing through it. What is the detention time in minutes?
 - A. 95 minutes
 - B. 363 minutes
 - C. 15 minutes
 - D. 100 minutes