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1. Before pumping, the static water level in a well is 15 feet. During pumping, the water level drops to 45 feet. What is the drawdown?  $45 - 15 = 30$ 
    - a. 15
    - b. 30
    - c. 45
    - d. 60
    - e. 90
  2. A well produces 365 gpm with a drawdown of 22.5 ft. What is the specific yield in gallons per minute per foot?
    - a. 16.2
    - b. 22.5
    - c. 32.4
    - d. 86.5
  3. A well is located in an aquifer with a water table elevation 20 feet below the ground surface. After operating for three hours, the water level in the well stabilizes at 50 feet below the ground surface. The pumping water level is:
    - a. 20 feet
    - b. 30 feet
    - c. 50 feet
    - d. 70 feet
    - e. 100 feet
  4. Calculate drawdown, in feet, using the following data:  
The water level in a well is 20 feet below the ground surface when the pump is not in operation, and the water level is 35 feet below the ground surface when the pump is in operation.
    - a. 15 feet
    - b. 20 feet
    - c. 35 feet
    - d. 55 feet
  5. A well is producing 0.00125 MGD. Its static water level was 35 ft and its current pumping water level is 115 ft. What is the specific capacity of this well?
    - a. 0.016 gpm/ft
    - b. 4.7 gpm/ft
    - c. 10.9 gpm/ft
    - d. 15.6 gpm/ft
    - e. 100 gpm/ft
  6. Determine the drawdown from a well measuring a static water level of 120 feet and a pumping water level of 205 feet?
    - a. 105 ft

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- b. 320 feet
  - c. 85 feet
  - d. 310 feet
7. Find the specific yield in gpm/ft if a well produces 105 gpm and the drawdown for the well is 16.3 ft.
- a. 6.00 gpm / ft
  - \*b. 6.44 gpm / ft
  - c. 7.20 gpm / ft
  - d. 7.28 gpm / ft
8. Find the drawdown of a well that has a specific yield of 28.4 , if the well yields 325 gpm.
- a. 9.8 ft
  - \*b. 11.4 ft
  - c. 12.9 ft
  - d. 14.1 ft
9. Calculate the well yield in gpm, given a drawdown of 14.1 ft and a specific yield of 31 gpm / ft.
- a. 2.2 gpm
  - b. 7.3 gpm
  - c. 45.1 gpm
  - \*d. 440 gpm
1. A well yields 2,840 gallons in exactly 20 minutes. What is the well yield in gpm?
- a. 140 gpm
  - b. 142 gpm
  - c. 145 gpm
  - d. 150 gpm
2. Before pumping, the water level in a well is 15 ft. down. During pumping, the water level is 45 ft. down. The drawdown is:
- a. 30 ft.
  - b. 60 ft.
  - c. 45 ft.
  - d. 15 ft.
3. A well produces 365 gpm with a drawdown of 22.5 ft. What is the specific yield in gallons per minute per foot?
- a. 16.2
  - b. 22.5
  - c. 32.4
  - d. 86.5
4. A well is located in an aquifer with a water table elevation 20 feet below the ground surface. After operating for three hours, the water level in the well stabilizes at 50 feet below the ground surface. The pumping water level is:

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- a. 20 feet
  - b. 30 feet
  - c. 50 feet
  - d. 70 feet
  - e. 100 feet
5. Calculate drawdown, in feet, using the following data:  
The water level in a well is 20 feet below the ground surface when the pump is not in operation, and the water level is 35 feet below the ground surface when the pump is in operation.
- a. 15 feet
  - b. 20 feet
  - c. 35 feet
  - d. 55 feet
6. Calculate the well yield in gpm, given a drawdown of 14.1 ft and a specific yield of 31 gpm/ft.
- a. 2.2 gpm
  - b. 7.3 gpm
  - c. 45.1 gpm
  - d. 440 gpm
7. A well is producing 0.00125 MGD. Its static water level was 35 ft and its current pumping water level is 115 ft. What is the specific capacity of this well?
- a. 0.016 gpm/ft
  - b. 4.7 gpm/ft
  - c. 10.9 gpm/ft
  - d. 15.6 gpm/ft
  - e. 100 gpm/ft
8. Determine the drawdown from a well measuring a static water level of 120 feet and a pumping water level of 205 feet?
- a. 105 ft
  - b. 320 feet
  - c. 85 feet
  - d. 310 feet
9. Before pumping, the static water level in a well is 15 feet. During pumping, the water level drops to 45 feet. What is the drawdown?
- a. 15 ft
  - b. 30 ft
  - c. 45 ft
  - d. 60 ft
  - e. 90 ft

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10. The specific capacity for a well is 10 gpm-ft. If the well produces 550 gallons per minute, what is the drawdown?
  11. The distance between the ground surface to the water level in a well when the pump is not operating is 98 ft. Distance from the ground surface to the water in the well when the pump is operating is 116 feet. Calculate the drawdown in the well under these conditions.
  12. What is the specific capacity in gpm/feet a well that is pumping 495 gpm and has a static level of 55 feet and a pumping level of 110 feet?
  13. During a test for well yield, a well produced 760 gallons per minute. The drawdown for the test is 22 feet What is the specific capacity in gallons per min-ft/?
  14. The pumped water level of a well is 400 feet below the surface. The well produces 250 gpm. If the aquifer level 50 feet below the surface, what is the specific capacity for the well

Solution:

1. Yield (gpm) =  $\frac{2,840 \text{ gallons}}{20 \text{ min}} = \boxed{142 \text{ gpm}}$
2. Drawdown = initial – pumping =  $15 - 45 = \boxed{30 \text{ ft}}$
3. Specific yield =  $\frac{\text{Yield}}{\text{Drawdown}} = \frac{365 \text{ gpm}}{22.5 \text{ ft}} = \boxed{16.2 \text{ gpm/ft}}$
4. 50 feet
5. Drawdown = initial – pumping =  $20 - 35 = \boxed{15 \text{ ft}}$
6. Specific yield =  $\frac{\text{Yield}}{\text{Drawdown}}$   
 $\Rightarrow 31 \text{ gpm/ft} = \frac{\text{Yield}}{14.1 \text{ ft}} \Rightarrow \text{Yield (gpm)} = 31 * 14.5 = \boxed{437 \text{ ft} \approx 440 \text{ ft}}$
7. Specific yield =  $\frac{\text{Yield}}{\text{Drawdown}}$  where Drawdown = initial – pumping  
 $\Rightarrow \text{Specific Yield} = \frac{\text{Yield}}{\text{initial} - \text{pumping}} = \frac{0.00125 \text{ MGD} * \frac{1,000,000 \text{ gpm}}{\text{MGD}}}{35 - 115} = \boxed{15.6 \text{ gpm/ft}}$
8. Drawdown = initial – pumping =  $120 - 205 = \boxed{85 \text{ ft}}$
9. Drawdown = initial – pumping =  $15 - 45 = \boxed{30 \text{ ft}}$
10. Specific Yield =  $\frac{\text{Yield}}{\text{Drawdown}}$   
 $\Rightarrow 10 \text{ gpm/ft} = \frac{550 \text{ gpm}}{\text{Drawdown (ft)}} \Rightarrow \text{Drawdown ft} = \frac{550}{10} = \boxed{55 \text{ ft}}$
11. Drawdown = initial – pumping =  $98 - 116 = \boxed{18 \text{ ft}}$

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12. Specific Yield =  $\frac{Yield}{Drawdown}$  where Drawdown = initial – pumping

$$\Rightarrow \text{Specific Yield} = \frac{Yield}{\text{initial} - \text{pumping}} = \frac{495gpm}{55 - 110} = \boxed{9gpm/ft}$$

13. Specific yield =  $\frac{Yield}{Drawdown} = \frac{760gpm}{22ft} = \boxed{34.5gpm/ft}$

14. Drawdown = 400-50 = 350 ft

$$\text{Specific yield} = \frac{Yield}{Drawdown} = \frac{250gpm}{350ft} = \boxed{0.7gpm/ft}$$