

1

It takes 6 technicians a total of 10 hours to build and program a new server from Direct Computer, with each working at the same rate. If six technicians start to build the server at 11:00 AM, and one technician per hour is added beginning at 5:00 PM, at what time will the server be complete?

- A. 7:30 PM
- B. 7:45 PM
- C. 8:00 PM
- D. 9:00 AM
- E. 10:00 PM

2

Pipe A fills a tank of capacity 700 liters at the rate of 40 liters a minute. Another pipe B fills the same tank at the rate of 30 liters a minute. A pipe at the bottom of the tank drains the tank at the rate of 20 liters a minute. If pipe A is kept open for a minute and then closed and pipe B is open for a minute and then closed and then pipe C is open for a minute and then closed and the cycle is repeated, when will the tank be full?

3

Machine A can process 6000 envelopes in 3 hours. Machines B and C working together but independently can process the same number of envelopes in 2.5 hours. If Machines A and C working together but independently process 3000 envelopes in 1 hour, then how many hours would it take Machine B to process 12000 envelopes.

- A. 2
- B. 3
- C. 4
- D. 6
- E.  $60/7$

4

A furniture manufacturer has two machines, but only one can be used at a time. Machine A is utilized during the first shift and Machine B during the second shift, while both work half of the third shift. If Machine A can do the job in 12 days working two shifts and Machine B can do the job in 15 days working two shifts, how many days will it take to do the job with the current work schedule?

- A. 14
- B. 13
- C. 11
- D. 9
- E. 7

5

An empty pool being filled with water at a constant rate takes 8 hours to fill to  $\frac{3}{5}$  of its capacity. How much more time will it take to finish filling the pool?

- A. 5hr 30min
- B. 5hr 20min
- C. 4hr 48min
- D. 3 hr 12min
- E. 2hr 40 min