EduSahara™ Assignment

Name : Pipe Problems

Chapter : Direct and Inverse Proportions

Grade : SSC Grade VIII

1. Pipe A can fill a tank in $3\,\text{hr}$ and pipe B can empty the full tank in $21\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

   (i) $3\frac{1}{2}\,\text{hr}$ (ii) $2\frac{1}{2}\,\text{hr}$ (iii) $3\frac{1}{4}\,\text{hr}$ (iv) $4\,\text{hr}$ (v) $4\frac{1}{2}\,\text{hr}$

2. Two pipes can fill a tank in $6\,\text{min}$ and $12\,\text{min}$ respectively. Both pipes are opened together and after some time the first pipe is closed and the tank becomes full in $8\,\text{min}$ from the time when both pipes are opened. For how much time was first pipe open?

   (i) $-1\,\text{min}$ (ii) $3\,\text{min}$ (iii) $5\,\text{min}$ (iv) $1\,\text{min}$ (v) $2\,\text{min}$

3. Due to a leak at the bottom, pipe Y takes $4\frac{4}{7}\,\text{hr}$ to fill the tank. The leak alone can empty the full tank in $32\,\text{hr}$. In what time can pipe Y alone fill the tank when the leak is closed?

   (i) $4\,\text{hr}$ (ii) $6\,\text{hr}$ (iii) $5\,\text{hr}$ (iv) $1\,\text{hr}$ (v) $3\,\text{hr}$

4. Pipe A can fill a tank in $2\,\text{hr}$ and pipe B can empty the full tank in $6\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

   (i) $5\,\text{hr}$ (ii) $1\,\text{hr}$ (iii) $2\,\text{hr}$ (iv) $3\,\text{hr}$ (v) $4\,\text{hr}$

5. Two pipes can fill a tank in $5\,\text{min}$ and $18\,\text{min}$ respectively. Both pipes are opened together and after some time the first pipe is closed and the tank becomes full in $10\frac{4}{5}\,\text{min}$ from the time when both pipes are opened. For how much time was first pipe open?

   (i) $-1\,\text{min}$ (ii) $1\,\text{min}$ (iii) $5\,\text{min}$ (iv) $2\,\text{min}$ (v) $3\,\text{min}$

6. Due to a leak at the bottom, pipe Y takes $9\,\text{hr}$ to fill the tank. The leak alone can empty the full tank in $72\,\text{hr}$. In what time can pipe Y alone fill the tank when the leak is closed?

   (i) $10\,\text{hr}$ (ii) $9\,\text{hr}$ (iii) $7\,\text{hr}$ (iv) $6\,\text{hr}$ (v) $8\,\text{hr}$

7. Pipe A can fill a tank in $3\,\text{hr}$ and pipe B can empty the full tank in $12\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

   (i) $5\,\text{hr}$ (ii) $2\,\text{hr}$ (iii) $7\,\text{hr}$ (iv) $4\,\text{hr}$ (v) $3\,\text{hr}$

8. Two pipes can fill a tank in $9\,\text{min}$ and $22\,\text{min}$ respectively. Both pipes are opened together and after some time the first pipe is closed and the tank becomes full in $9\frac{7}{9}\,\text{min}$ from the time when both pipes are opened. For how much time was first pipe open?

   (i) $5\,\text{min}$ (ii) $7\,\text{min}$ (iii) $2\,\text{min}$ (iv) $4\,\text{min}$ (v) $6\,\text{min}$

Due to a leak at the bottom, pipe Y takes 6 hr to fill the tank.

9. The leak alone can empty the full tank in 6 hr.
In what time can pipe Y alone fill the tank when the leak is closed?

(i) 3 hr (ii) 2 hr (iii) 4 hr (iv) 0 hr (v) 5 hr

Pipe A can fill a tank in 9 hr and pipe B can empty the full tank in

10. 45 hr. If both the pipes are opened together,
in how much time will the tank become full?

(i) $11\frac{3}{4}$ hr (ii) $11\frac{1}{6}$ hr (iii) $11\frac{1}{2}$ hr (iv) $11\frac{1}{4}$ hr (v) $10\frac{3}{4}$ hr

Assignment Key

1) (i)	2) (v)	3) (i)	4) (iv)	5) (iv)	6) (v)
7) (iv)	8) (i)	9) (i)	10) (iv)		