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 $9\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

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

2. Two pipes can fill a tank in $15\,\text{min}$ and $26\,\text{min}$ respectively. Both pipes are opened together and after some time the first pipe is closed and the tank becomes full in $12\frac{2}{15}\,\text{min}$ from the time when both pipes are opened. For how much time was first pipe open?

(i) $5\,\text{min}$ (ii) $9\,\text{min}$ (iii) $8\,\text{min}$ (iv) $10\,\text{min}$ (v) $7\,\text{min}$

3. Due to a leak at the bottom, pipe Y takes $7\frac{7}{8}\,\text{hr}$ to fill the tank. The leak alone can empty the full tank in $63\,\text{hr}$. In what time can pipe Y alone fill the tank when the leak is closed?

(i) $8\,\text{hr}$ (ii) $6\,\text{hr}$ (iii) $10\,\text{hr}$ (iv) $5\,\text{hr}$ (v) $7\,\text{hr}$

4. Pipe A can fill a tank in $7\,\text{hr}$ and pipe B can empty the full tank in $35\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

(i) $9\frac{1}{2}\,\text{hr}$ (ii) $9\frac{1}{4}\,\text{hr}$ (iii) $8\frac{3}{4}\,\text{hr}$ (iv) $8\frac{1}{4}\,\text{hr}$ (v) $8\frac{1}{2}\,\text{hr}$

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 $14\frac{2}{5}\,\text{min}$ from the time when both pipes are opened. For how much time was first pipe open?

(i) $4\,\text{min}$ (ii) $2\,\text{min}$ (iii) $-1\,\text{min}$ (iv) $1\,\text{min}$ (v) $0\,\text{min}$

6. Due to a leak at the bottom, pipe Y takes $3\,\text{hr}$ to fill the tank. The leak alone can empty the full tank in $6\,\text{hr}$. In what time can pipe Y alone fill the tank when the leak is closed?

(i) $0\,\text{hr}$ (ii) $2\,\text{hr}$ (iii) $4\,\text{hr}$ (iv) $1\,\text{hr}$ (v) $3\,\text{hr}$

7. Pipe A can fill a tank in $7\,\text{hr}$ and pipe B can empty the full tank in $49\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

(i) $8\frac{1}{2}\,\text{hr}$ (ii) $8\frac{1}{8}\,\text{hr}$ (iii) $8\frac{1}{4}\,\text{hr}$ (iv) $8\frac{1}{6}\,\text{hr}$ (v) $7\frac{5}{6}\,\text{hr}$

8. Two pipes can fill a tank in $12\,\text{min}$ and $26\,\text{min}$ respectively. Both pipes are opened together and after some time the first pipe is closed and the tank becomes full in $13\,\text{min}$ from the time when both pipes are opened. For how much time was first pipe open?

(i) $6\,\text{min}$ (ii) $5\,\text{min}$ (iii) $4\,\text{min}$ (iv) $7\,\text{min}$ (v) $8\,\text{min}$

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9. Due to a leak at the bottom, pipe Y takes $8\,\text{hr}$ to fill the tank. The leak alone can empty the full tank in $56\,\text{hr}$. In what time can pipe Y alone fill the tank when the leak is closed?

(i) $6\,\text{hr}$ (ii) $8\,\text{hr}$ (iii) $5\,\text{hr}$ (iv) $7\,\text{hr}$ (v) $10\,\text{hr}$

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10. Pipe A can fill a tank in $2\,\text{hr}$ and pipe B can empty the full tank in $8\,\text{hr}$. If both the pipes are opened together, in how much time will the tank become full?

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

Assignment Key

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