Name: Word Problems on Linear Equations

**Chapter: Simple Linear Equations** 

Grade: ICSE Grade VIII

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	A student walks from his house to school at 3.45 kmph and arrives 6.00 min late. The next day he walks at 11.3	37
	kmph and reaches the school 31.20 min before time. What is the distance from his house to school?	

- (i) 3.07 km (ii) 5.07 km (iii) 4.07 km (iv) 1.07 km (v) 2.07 km
- 2. A student walks from his house to school at 2.39 kmph and arrives 37.20 min late. The next day he walks at 7.61 kmph and reaches the school 2.80 min before time. At what speed must he travel to reach the school on time?
  - (i) 4.60 kmph (ii) 6.60 kmph (iii) 5.60 kmph (iv) 8.60 kmph (v) 7.60 kmph
- A train crosses a telegraph post in 28.59 sec and a bridge 656.16 m long in 45.06 sec. What is the length of the train?
  - (i) 1137.03 m (ii) 1139.03 m (iii) 1138.03 m (iv) 1140.03 m (v) 1141.03 m
- A train crosses a telegraph post in 30.91 sec and a bridge 1988.80 m long in 79.17 sec. What is the speed of the train?
  - (i) 39.21 m/sec (ii) 40.21 m/sec (iii) 43.21 m/sec (iv) 41.21 m/sec (v) 42.21 m/sec

A certain number of men can do a work in 40 days.

- 5. If there were 4 men less, it would take 16 days more to complete the work. How many men are required to complete the work in 35 days?
  - (i) 16 (ii) 18 (iii) 15 (iv) 17 (v) 14

Person P is seven times as good a workman as Person Q.

6. They can do a work together in  $3\frac{1}{2}$  days.

In how many days Q alone can do the work?

- (i) 29 days (ii) 27 days (iii) 28 days (iv) 25 days (v) 31 days
- 7. What number must be added to each term of the ratio 24:84 to make it 22:27?
  - (i) 237 (ii) 241 (iii) 239 (iv) 240 (v) 243
- 8. A ratio is equal to 14:1. If its antecendent is 13300, what is its consequent?
  - (i) 949 (ii) 951 (iii) 950 (iv) 948 (v) 953
- 9. A ratio is equal to 2:15. If its consequent is 13860, what is its antecendent?
  - (i) 1849 (ii) 1847 (iii) 1848 (iv) 1850 (v) 1845
- 10. Two numbers are in the ratio 3: 4. If 14 is added to each number, the ratio becomes 25: 31. Find the numbers.
  - (i) 30:40 (ii) 42:56 (iii) 39:52 (iv) 36:48 (v) 33:44

The ratio of two numbers is

11. 2:3

and their LCM is 72. Find the numbers.

(i) 26:39 (ii) 20:30 (iii) 24:36 (iv) 28:42 (v) 22:33

12. Find the number which bears the same ratio to $\frac{1}{8}$ that $\frac{4}{7}$ does to $\frac{2}{7}$ (i) $(\frac{-1}{4})$ (ii) $\frac{1}{6}$ (iii) $\frac{3}{4}$ (iv) $\frac{1}{2}$ (v) $\frac{1}{4}$
The ages of A and B are in the ratio 2: 1. 6 years hence, their ages will be in the ratio 11: 6. Find their present ages.  (i) 58:29 (ii) 64:32 (iii) 56:28 (iv) 60:30
14. The ages of A and B are in the ratio 7:10.9 years ago, their ages were in the ratio 2:3. Find their present ages.  (i) 49:70 (ii) 77:110 (iii) 63:90 (iv) 56:80
<ul> <li>In a mixture of 391 litres, the ratio of milk and water is 12: 11. How much water must be added to this mixture to make the ratio 204: 241?</li> <li>(i) 57 (ii) 53 (iii) 55 (iv) 54 (v) 52</li> </ul>
The ratio of males to females in a committee of 140 members is 3 : 4. How many more ladies should be added to the committee so that the ratio of males to females is 6 : 17?  (i) 89 (ii) 93 (iii) 90 (iv) 91 (v) 87
In an examination, the ratio of passes to failures was 5 : 2.  17. Had 80 less appeared and 10 less passed, the ratio of passes to failures would have been 13 : 3.  How many students appeared for the examination?  (i) 570 (ii) 555 (iii) 550 (iv) 565 (v) 560
In a company, the number of engineers to managers is in the ratio 5 : 2 . After a year, when 10 engineers and 10 18. managers left, the ratio between engineers to managers is 29 : 11 . Find the number of engineers and managers at the beginning?  (i) 400 (ii) 430 (iii) 440 (iv) 420 (v) 410
19. Two angles of a triangle measure 54° and 62° respectively. Find the measure of the third angle of the triangle  (i) 64° (ii) 62° (iii) 63° (iv) 65° (v) 66°
20. The angles of a triangle ABC are in the ratio $1:2:3$ . Find the measure of each angle of the triangle (i) $A=32^\circ, B=60^\circ, C=88^\circ$ (ii) $A=28^\circ, B=60^\circ, C=92^\circ$ (iii) $A=30^\circ, B=58^\circ, C=92^\circ$ (iv) $A=28^\circ, B=62^\circ, C=90^\circ$ (v) $A=30^\circ, B=60^\circ, C=90^\circ$
21. In $\triangle$ IJK, if $\angle$ I = 69° and $\angle$ J = 67°, find the measure of $\angle$ K (i) K=44° (ii) K=43° (iii) K=45° (iv) K=46° (v) K=42°
22. In $\triangle$ EFG, if $\angle$ E = 50° and $\angle$ F = $\angle$ G, find the measure of each of the equal angles of the triangle (i) 63° (ii) 67° (iii) 64° (iv) 65° (v) 66°
23. One angle of a triangle measures $60^\circ$ and the other two angles are in the ratio $3:5$ . Find these angles. (i) $B=46^\circ, C=76^\circ$ (ii) $B=43^\circ, C=73^\circ$ (iii) $B=44^\circ, C=74^\circ$ (iv) $B=45^\circ, C=75^\circ$ (v) $B=47^\circ, C=77^\circ$

24. In a right-angled triangle, the two acute angles are in the ratio 1:5. Find these angles.

(i)  $A=16^{\circ}, C=76^{\circ}$  (ii)  $A=13^{\circ}, C=73^{\circ}$  (iii)  $A=14^{\circ}, C=74^{\circ}$  (iv)  $A=17^{\circ}, C=77^{\circ}$  (v)  $A=15^{\circ}, C=75^{\circ}$ 

The speed of a motor boat is 30.25 m/sec and the speed of a stream is 5.82 m/sec. A & B are two location 25. adjacent to a stream. If it takes 284.30 sec to go from point A to B and come back, What is the distance between A and B?

(i) 4141.87 m (ii) 4138.87 m (iii) 4140.87 m (iv) 4142.87 m (v) 4139.87 m

		А	ssignment Key			
1) (i)	2) (ii)	3) (ii)	4) (iv)	5) (i)	6) (iii)	
7) (iv)	8) (iii)	9) (iii)	10) (iv)	11) (iii)	12) (v)	
13) (iv)	14) (iii)	15) (iv)	16) (iii)	17) (v)	18) (iv)	
19) (i)	20) (v)	21) (i)	22) (iv)	23) (iv)	24) (v)	
25) (iii)						

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