

**1. A certain chemical mixture should be in the ratio of 4 parts "A", 6 parts "B", and 2 parts "C". If a 15 kg batch is to be mixed, what quantities in kg of "A", "B", and "C" should be used in the batch?**

- a.  $A = 5, B = 7.5, \text{ and } C = 2.5$
- b.  $A = 4, B = 6, \text{ and } C = 5$
- c.  $A = 5, B = 6, \text{ and } C = 4$
- d.  $A = 4.5, B = 6.5, \text{ and } C = 4$
- e.  $A = 3.5, B = 5.5, \text{ and } C = 6$

**2. A chemical mixture should be in the ratio of 9 parts "A", 2 parts "B" and 5 parts "C". A 64 kg batch is to be mixed. What quantity of "A" is required?**

- a. 52.36 kg
- b. 36 kg
- c. 20 kg
- d. 8 kg
- e. 2.25 kg

**3. A driving gear has 60 teeth and turns at 750 rpm. The driven gear has 90 teeth. What is the speed of the driven gear in rpm?**

- a. 1125
- b. 1000
- c. 500
- d. 450
- e. 400

**4. A gear has 1000 teeth and revolves at 50 rpm. The driven gear has 32 teeth. How fast does it turn?**

- a. 12.2 rpm
- b. 1562.5 rpm
- c. 609.8 rpm
- d. 640 rpm
- e. 390.2 rpm

**5. A gear wheel 330 mm in diameter and revolving at a speed of 200 rpm drives a wheel 150 mm in diameter. Find the speed in rpm of the second gear:**

- a. 91
- b. 100
- c. 330
- d. 400
- e. 440

**Quiz 42 Answers:**

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**1 = a, 2 = b, 3 = c, 4 = b, 5 = e**