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| **PERCENTAGE** |

**Express each of the following as a fraction:**

1. **56% = (56/100) = (14/25)**
2. **4% = (4/100) = (1/25)**
3. **0.6% = (0.6/100) = (6/1000) = (3/500)**
4. **0.08% = (0.08/100) = (8/10000) = (1/1250)**

**Express each of the following as a decimal:**

1. **28% = (28/100) = 0.28**
2. **6% = (6/100) = 0.06**
3. **0.2% = (0.2/100) = 0.002**
4. **0.04% = (0.04/100) = 0.0004**

**Express each of the following as rate percent:**

1. **(1/8) = (1/8) x 100 = (100/8) = (25/2) = 12½%**
2. **0.004 = (0.004 x 100) = 0.4%**
3. **6¾ = (27/4) x 100 = 25 x 27 = 675%**
4. **What percent of 72 is 6?**

**(6/72) x 100 = (25/3)%**

1. **What percent of 7 is 84?**

**(84/7) x 100 = 1200%**

1. **What percent of 2.4 kg is 8 grams?**

**2.4 kg = 2400 grams ……(8/2400) x 100 = (1/3)%**

1. **What percent of 6.5 liters is 130 ml?**

**6.5 liters = 6500 ml ………(130/6500) x 100 = 2%**

1. **5 out of 2250 parts of earth is sulphur. What is the percentage of sulphur in earth?**

**(5/2250) x 100 = (2/9)%**

1. **If 30% of a number is 12.6, then the number is:**
2. **41 (b) 42 (c) 51 (d) 52**

**Let 30% of x = 12.6**

**Then, x = (12.6 x 100)/30 = 42**

1. **5% of (25% of Rs 1600) is:**

**(1/20)(1/4)(1600) = Rs 20.**

1. **12.5% of 192 = 50% of ?**
2. **12 (b) 24 (c) 48 (d) 96**

**(1/8)(192) = (1/2)(x) implies x = 24 x 2 = 48**

1. **What percent of 7.2 kg is 18 grams?**
2. **25% (b) 2.5% (c) 0.25% (d) 0.025%**

**7.2 kg = 7200 grams**

**(18/7200) x 100 = (1/4) = 0.25%**

1. **If 40% of 40% of x = 40, then x = ?**
2. **100 (b) 250 (c) 400 (d) 1000**

**(2/5)(2/5)(x) = 40 (or) x = (40)(25/4) = 250**

1. **What will be 160% of a number whose 200% is 140?**
2. **200 (b) 160 (c) 140 (d) 112**

**200 ………140**

**160 ……….?**

**On cross-multiplication, we get (160 x 140)/200 = 112**

1. **Calculation shows that an angle is 37½0. The size obtained by drawing and measurement is 360. Find the error percent?**
2. **1½ (b) 3 (c) 4 (d) 4¼**

**Error difference = 37½0 – 360 = 1½0**

**Error percentage = (1½) / (37½) x 100 = (3/2)(2/75)(100) = 4%**

1. **If X is 90% of Y, what percent of X is Y?**
2. **90 (b) 101.1 (c) 111.1 (d) 190**

**X = (90/100)Y ………(X/Y) = (90/100)**

**Implies (100/90)(100) = 111.1%**

1. **It is known that 20% of the mangoes are rotten. If the number of rotten mangoes is 35, then the total number of mangoes is:**
2. **150 (b) 160 (c) 175 (d) 180**

**20% of x = 35 implies (1/5)x = 35 implies x = (35)(5) = 175**

1. **If 70% of students in a school are boys and the number of girls is 504, the number of boys is:**
2. **1680 (b) 1440 (c) 1276 (d) 1176**

**70% of students are boys means remaining 30% are girls.**

**30 ………….504**

**70 ………….? By cross-multiplication we get (70 x504)/30 = 1176 boys**

1. **A student has to secure 40% marks to pass. He gets 178 marks and fails by 22 marks. The maximum marks are:**
2. **200 (b) 500 (c) 600 (d) 800**

**Pass marks = 40% of x = 178 + 22 = 200**

**Max. marks are x = (200)(5/2) = 500**

1. **In a library, 20% of books are in Hindi, 50% of the remaining are in English and the remaining 9000 are in various other languages. What is the total number of books?**

**Let total books in library = 100x.**

**Hindi books = 20x Remaining = 100x – 20x = 80x**

**In this English books are 40x and**

**books on other languages are 40x = 9000 (given)**

**(40x) ……………9000**

**(100x) …………. ? On cross-multiplication we get**

**Total books = (100x)(9000)/(40x) = 22500**

1. **Swathi spends 40% of her salary on food, 25% on house rent, 15% on entertainment and 5% on conveyance. If her saving at the end of a month is Rs 12000, then what is her monthly salary in rupees?**
2. **Rs 40000 (b) Rs 50000 (c) Rs 60000 (d) Rs 80000**

**Saving = 100 – (40 + 25 + 15 + 5) = 15**

**15% of x = 12000 (given) x = (12000 x 100)/15 = Rs 80000**

1. **In an examination, 1100 boys and 900 girls appeared. 50% of the boys and 40% of the girls passed the examination. The percentage of candidates failed is:**
2. **44.4 (b) 45 (c) 45.5 (d) 54.5**

**Boys failed = 50% of 1100 = 550 Girls failed = 60% of 900 = 540**

**Total failed = 550 + 540 = 1090 (out of total students 1100 + 900 = 2000 in the college)**

**Failed percentage= (1090/2000) x 100 = 54.5%**

1. **A school has only three classes which contain 40, 50 and 60 students respectively. The pass percentage of these classes are 10, 20 and 10 respectively. Find the pass percentage of the school?**
2. **13.33 (b) 15 (c) 16.66 (d) 20**

**Total students in all three classes = 40 + 50 + 60 = 150**

**Passed students in all three classes = (10% of 40) + (20% of 50) + (10% of 60)**

**= 4 + 10 + 6 = 20**

**Pass percentage = (20/150) x 100 = (40/3) = 13.33%**

1. **Anil secured 50% marks in Hindi, 60% in English and 70% in Mathematics as well as Science. What were his total marks if the maximum marks obtainable in each of these 4 subjects was 50?**
2. **100 (b) 120 (c) 125 (d) 150**

**If the max. marks are 100 for each subject, then 50 + 60 + 70 + 70 = 250**

**If the max. marks are 50 then (250/2) = 125**