MATHS

BOOKS - NCERT EXEMPLAR

COMPARING QUANTITIES

Example

1. The ratio of the heights 1.50 m and 75 cm of two persons can be written as

A. $1:50$

B. $1:5$

C. $2:1$

D. $1:2$

Answer: C

2. Out of 50 children in a class, 20 are boys. Then the percentage of girls is

   A. 60

   B. 30

   C. 50

   D. $66\dfrac{2}{3}$

Answer: A

3. The interest on Rs. 5000 at the rate of 15% per annum for one month is

   A. Rs. 750

   B. Rs. 75

C. Rs. 625

D. Rs. 62.50

Answer: D

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4. If two ratios are equivalent, then the four quantities are said to be in _____.

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5. 40% of 250 km is _____.

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6. If 25% of a journey is 800 km, the total distance of the journey is 3000 km.

7. 0.05 is equivalent to 5%.

8. Suhana sells a sofa set for Rs. 9600 making a profit of 20%. What is the C.P. of the sofa set?

9. John borrowed Rs. 75000 from his friend and after one year returned Rs. 80000 to his friend. Find the interest.
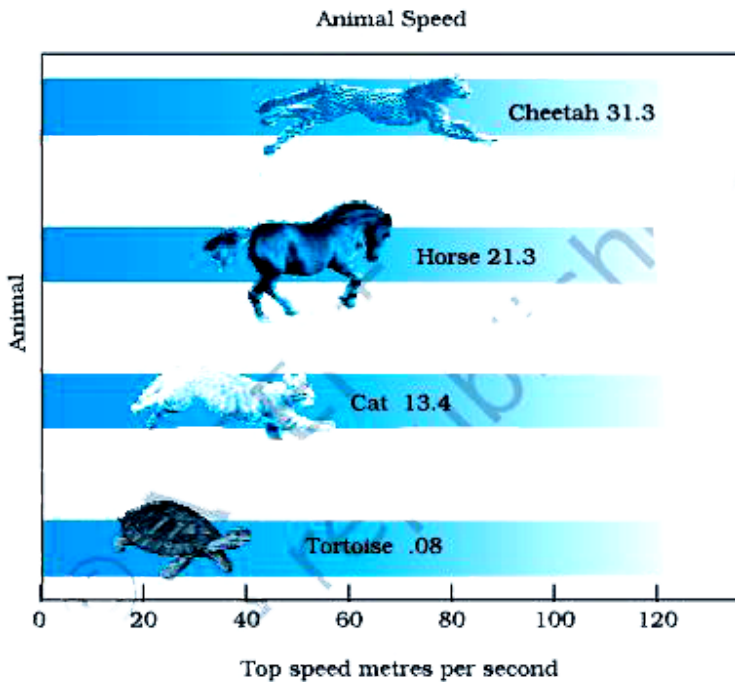
10. If Meenakshee pays an interest of Rs. 1500 for 4 years on a sum of Rs. 2500, find the rate of interest per annum(p.a.)

11. Refer to the graphic. If a cheetah and tortoise travel at their top speeds for 1minute, how much farther does the cheetah travel?

Animal Speed

Top speed metres per second

1. 20% of 700 m is

    A. 560 m

    B. 70 m

    C. 210 m

    D. 140 m

Answer:

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2. Gayatri's income is Rs. 1,60,000 per year. She pays 15% of this as house rent and 10% of the remainder on her child's education. The money left with her is

    A. Rs. 136000

B. Rs. 120000

C. Rs. 122400

D. Rs. 14000

Answer: C

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3. The ratio of Fatima's income to her savings is 4 : 1. The percentage of money saved by her is :

A. 20 %

B. 25 %

C. 40 %

D. 80 %

Answer: B

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4. 0.07 is equal to

A. 70 %

B. 7 %

C. 0.7 %

D. 0.07 %

Answer: B

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5. In a scout camp, 40% of the scouts were from Gujarat State and 20% of these were from Ahmedabad. The percentage of scouts in the camp from Ahmedabad is:

A. 25

B. 32.5

C. 8

D. 50

Answer: C

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6. What percent of Rs. 4500 is Rs. 9000?

A. 200

B. $\dfrac{1}{2}$

C. 2

D. 50

Answer: A

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7. 5.2 is equal to

   A. 52 %

   B. 5.2 %

   C. 520 %

   D. 0.52 %

Answer:

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8. The ratio 3 : 8 is equal to

   A. 3.75 %

   B. 37.5 %

   C. 0.375 %

   D. 267 %

Answer:

9. 225% is equal to

    A. $9:4$

    B. $4:9$

    C. $3:2$

    D. $2:3$

Answer:

10. A bicycle is purchased for Rs. 1800 and is sold at a profit of 12%. Its selling price is

A. Rs. 1584

B. Rs. 2016

C. Rs. 1788

D. Rs. 1812

Answer: B

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11. A cricket bat was purchased for Rs. 800 and was sold for Rs. 1600. Then profit earned is

A. 100 %

B. 64 %

C. 50 %

D. 60 %

Answer:

12. A farmer bought a buffalo for Rs. 44000 and a cow for Rs. 18000. He sold the buffalo at a loss of 5% but made a profit of 10% on the cow. The net result of the transaction is

    A. loss of Rs. 200

    B. profit of Rs. 400

    C. loss of Rs. 400

    D. profit of Rs. 200

Answer:

13. If Mohan's income is 25% more than Raman's income, then Raman's income is less than Mohan's income by

A. 25 %

B. 80 %

C. 20 %

D. 75 %

Answer: C

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14. The interest on Rs. 30000 for 3 years at the rate of 15% per annum is

A. Rs. 4500

B. Rs. 9000

C. Rs. 18000

D. Rs. 13500

Answer:

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15. Amount received on Rs. 3000 for 2 years at the rate of 11% per annum is

    A. Rs. 2340

    B. Rs. 3660

    C. Rs. 4320

    D. Rs. 3330

Answer:

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16. Interest on Rs. 12000 for 1 month at the rate of 10 % per annum is

    A. Rs. 1200

    B. Rs. 600

    C. Rs. 100

D. Rs. 12100

Answer:

17. Rajni and Mohini deposited Rs. 3000 and Rs. 4000 in a company at the rate of 10% per annum for 3 years and $2\frac{1}{2}$ years respectively. The difference of the amounts received by them will be

A. Rs. 100

B. Rs. 1000

C. Rs. 900

D. Rs. 1100

Answer:

18. If 90% of x is 315 km, then the value of x is

A. 325 km

B. 350 km

C. 405 km

D. 340 km

Answer:

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19. On selling an article for Rs. 329, a dealer lost 6%. The cost price of the article is

A. Rs. 310.37

B. Rs. 348.74

C. Rs. 335

D. Rs. 350

Answer: D

20. $\dfrac{25\ \%\ of\ 50\ \%\ of\ 100\ \%}{\frac{25}{100}\ \times\ 50\ \%\ of\ 100}$ is equal to

A. $1.1\ \%$

B. $0.1\ \%$

C. $0.01\ \%$

D. $1\ \%$

Answer: D

21. The sum which will earn a simple interest of Rs. 126 in 2 years at 14% per annum is
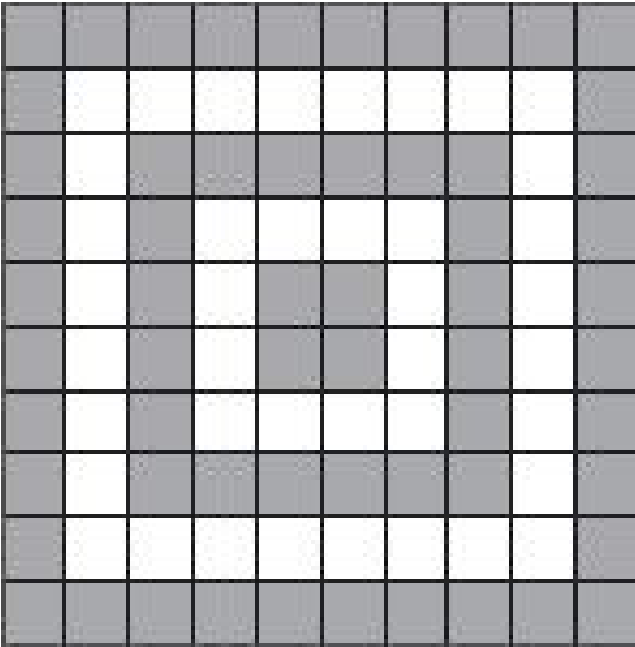
A. Rs. 394

B. Rs. 395

C. Rs. 450

D. Rs. 540

Answer: C

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22. The per cent that represents the unshaded region in the figure.
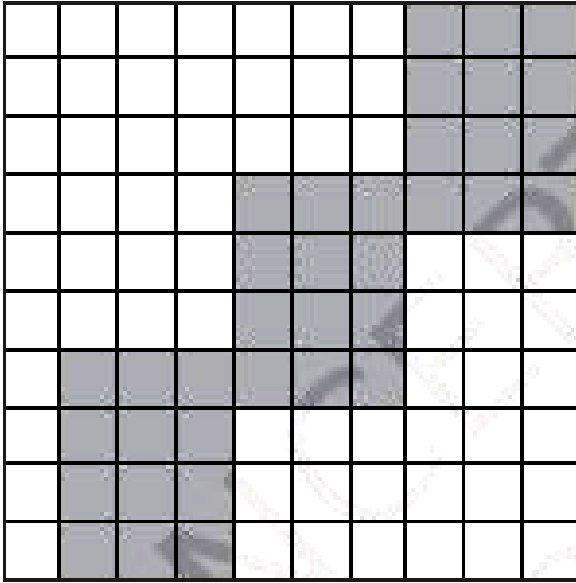

A. 75 %

B. 50 %

C. 40 %

D. 60 %

Answer:

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23. The per cent that represents the shaded region in the figure is

A. 36 %

B. 64 %

C. 27 %

D. 48 %

Answer:

24. 2 : 3 = _____ %

25. $18\dfrac{3}{4}\%$ = _____:_____

26. 30% of Rs. 360 = _____.

27. 120 % of 50 km = _____.

28. 2.5 = _____%

29. $\dfrac{8}{5}$ = _____ %

30. Fill in the blanks

A _____ with its denominator 100 is called a per cent.

31. 15 kg is _____ % of 50 kg.

32. Weight of Nikhil increased from 60 kg to 66 kg. Then, the increase in weight is _____ %.

33. In a class of 50 students, 8 % were absent on one day. The number of students present on that day was _____.

34. Savitri obtained 440 marks out of 500 in an examination. She secured _____ % marks in the examination.

35. Out of a total deposit of Rs. 1500 in her bank account, Abida withdrew 40% of the deposit. Now the balance in her account is _____.

36. _____ is 50% more than 60.

37. John sells a bat for Rs. 75 and suffers a loss of Rs. 8. The cost price of the bat is _____.

38. If the price of sugar is decreased by 20%, then the new price of 3kg sugar originally costing Rs. 120 will be _____.

39. Mohini bought a cow for Rs. 9000 and sold it at a loss of Rs. 900. The selling price of the cow is _____.

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40. Devangi buys a chair for Rs. 700 and sells it for Rs. 750. She earns a profit of _____ % in the transaction.

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41. Sonal bought a bed sheet for Rs. 400 and sold it for Rs. 440. Her _____% is _____.

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42. Nasim bought a pen for 60 and sold it for 54. His _____% is _____.

43. Aahuti purchased a house for Rs. 50,59,700 and spent Rs. 40300 on its repairs. To make a profit of 5%, she should sell the house for Rs. _____.

44. If 20 lemons are bought for Rs. 10 and sold at 5 for three rupees, then _____ in the transaction is _____%.

45. Narain bought 120 oranges at Rs. 4 each. He sold 60 % of the oranges at Rs. 5 each and the remaining at Rs. 3.50 each. His _____ is _____%.

46. A fruit seller purchased 20 kg of apples at Rs. 50 per kg. Out of these, 5% of the apples were found to be rotten. If he sells the remaining apples at Rs. 60 per kg, then his _____is _____%.

47. Interest on Rs. 3000 at 10% per annum for a period of 3 years is _____.

48. Amount obtained by depositing Rs. 20,000 at 8 % per annum for six months is _____.

49. Interest on Rs. 12500 at 18% per annum for a period of 2 years and 4 months is _____.

50. 25 ml is _____ per cent of 5 litres.

51. If A is increased by 20%, it equals B. If B is decreased by 50%, it equals C. Then _____ % of A is equal to C.

52. Interest = $\dfrac{P \times R \times T}{100}$, where

T is _____

R% is _____ and

P is _____.

53. The difference of interest for 2 years and 3 years on a sum of Rs. 2100 at 8% per annum is _____.

54. To convert a fraction into a per cent, we _____ it by 100.

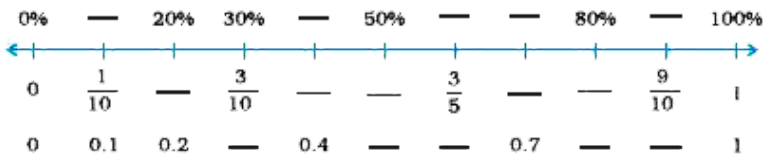55. To convert a decimal into a per cent, we shift the decimal point two places to the _____.

56. The _____ of interest on a sum of Rs. 2000 at the rate of 6% per annum for $1\dfrac{1}{2}$ years and 2 years is Rs. 420.

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57. When converted into percentage, the value of 6.5 is _____ than 100%.

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58. Fill in the blanks so that each mark on the number line is labelled with a per cent, a fraction and a decimal. Write all fractions in lowest terms.

0%	—	20%	30%	—	50%	—	—	80%	—	100%
0	$\dfrac{1}{10}$	—	$\dfrac{3}{10}$	—	—	$\dfrac{3}{5}$	—	—	$\dfrac{9}{10}$	1
0	0.1	0.2	—	0.4	—	—	0.7	—	—	1

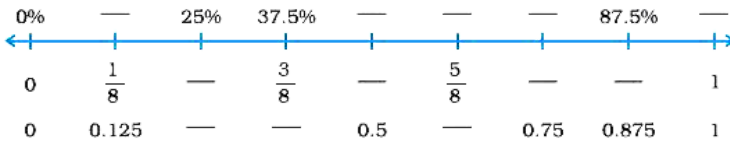> ▶ Watch Video Solution

59. Fill in the blanks so that each mark on the number line is labelled with a per cent, a fraction and a decimal. Write all fractions in lowest terms.

0%	—	25%	37.5%	—	—	—	87.5%	—
0	$\dfrac{1}{8}$	—	$\dfrac{3}{8}$	—	$\dfrac{5}{8}$	—	—	1
0	0.125	—	—	0.5	—	0.75	0.875	1

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60. $\dfrac{2}{3} = 66\dfrac{2}{3}\% \,.$

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61. When an improper fraction is converted into percentage then the answer can also be less than 100.

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62. 8 hours is 50% of 4 days.

63. The interest on Rs. 350 at 5% per annum for 73 days is Rs. 35.

64. The simple interest on a sum of Rs. P for T years at R% per annum is given by the formula: Simple Interest = $\dfrac{T \times P \times R}{100}$.

65. $75\% = \dfrac{4}{3}$.

66. 12% of 120 is 100.

67. If Ankita obtains 336 marks out of 600, then percentage of marks obtained by her is 33.6.

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68. 0.018 is equivalent to 8%.

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69. 50% of Rs. 50 is Rs. 25.

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70. 250 cm is 4% of 1 km.

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71. Out of 600 students of a school, 126 go for a picnic. The percentage of students that did not go for the picnic is 75.

72. By selling a book for Rs. 50, a shopkeeper suffers a loss of 10%. The cost price of the book is Rs. 60.

73. If a chair is bought for Rs. 2000 and is sold at a gain of 10%, then selling price of the chair is Rs. 2010.

74. If a bicycle was bought for Rs. 650 and sold for Rs. 585, then the percentage of profit is 10.

75. Sushma sold her watch for Rs. 3320 at a gain of Rs. 320. For earning a

gain of 10% she should have sold the watch for Rs. 3300.

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76. Interest on Rs. 1200 for $1\frac{1}{2}$ years at the rate of 15% per annum is Rs.

180.

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77. Amount received after depositing Rs. 800 for a period of 3 years at the

rate of 12% per annum is Rs. 896.

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78. Rs. 6400 were lent to Feroz and Rashmi at 15% per annum for $3\dfrac{1}{2}$ and 5 years respectively. The difference in the interest paid by them is Rs. 150.

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79. A vendor purchased 720 lemons at Rs. 120 per hundred. 10% of the lemons were found rotten which he sold at Rs. 50 per hundred. If he sells the remaining lemons at Rs. 125 per hundred, then his profit will be 16%.

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80. Find the value of x if

8% of Rs. x is Rs. 100

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81. Find the value of x if

32% of x kg is 400 kg

82. Find the value of x if

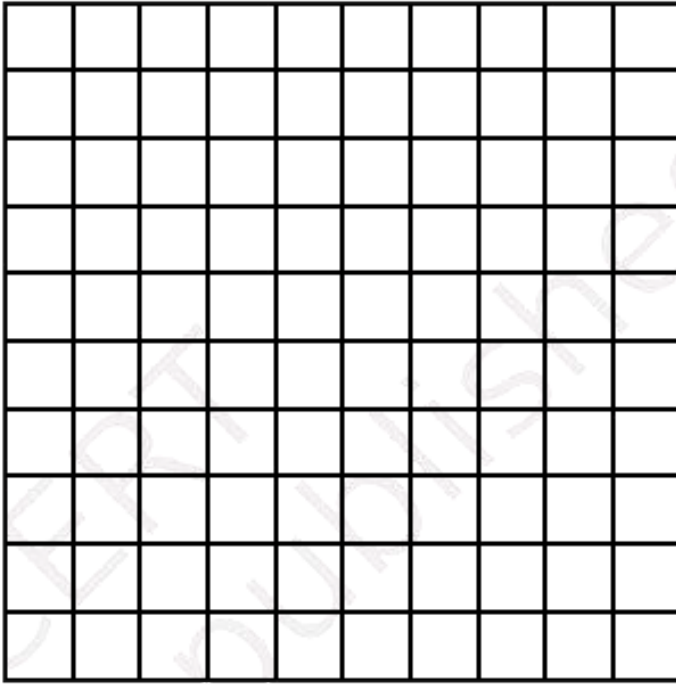35% of Rs. x is Rs. 280

83. Find the value of x if

45% of marks x is 405.

84. Imagine that a 10 × 10 grid has value 300 and that this value is divided evenly among the small squares. In other words, each small square is

worth 3. Use a new grid for each part of this problem, and label each grid

"Value : 300."

Shade 17% of the grid. What is 17% of 300? Compare the two answers.

85. Imagine that a 10 × 10 grid has value 300 and that this value is divided

evenly among the small squares. In other words, each small square is

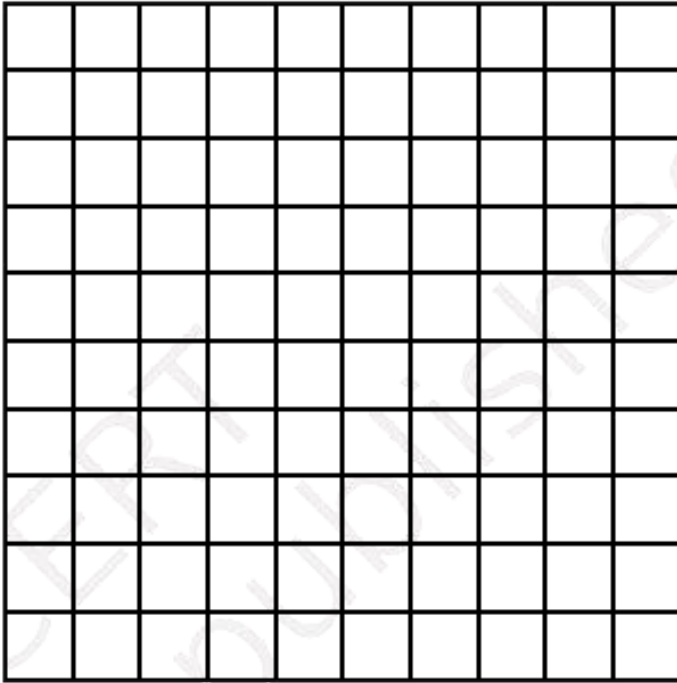worth 3. Use a new grid for each part of this problem, and label each grid

"Value : 300."

What is the value of $\frac{1}{10}$ the grid?

86. Express $\frac{1}{6}$ as a per cent.

87. Express $\dfrac{9}{40}$ as a per cent.

88. Express $\dfrac{1}{100}$ as a per cent.

89. Express 80% as fraction in its lowest term.

90. Express $33\dfrac{1}{3}\%$ as a ratio in the lowest term.

91. Express $16\dfrac{2}{3}\%$ as a ratio in the lowest term.

92. Express 150% as a ratio in the lowest form.

93. Write 0.089 as a per cent.

94. Write 1.56 as a per cent.

95. What is 15% of 20?

96. What is 800% of 800?

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97. What is 100% of 500?

> ▶ Watch Video Solution

98. What per cent of 1 hour is 30 minutes?

> ▶ Watch Video Solution

99. What per cent of 1 day is 1 minute?

> ▶ Watch Video Solution

100. What per cent of 1 km is 1000 metres?

101. Find out 8% of 25 kg.

102. What percent of Rs. 80 is Rs. 100?

103. 45% of the population of a town are men and 40% are women. What is the percentage of children?

104. The strength of a school is 2000. If 40 % of the students are girls then how many boys are there in the school?

105. Chalk contains 10% calcium, 3% carbon and 12% oxygen. Find the amount of carbon and calcium (in grams) in $2\dfrac{1}{2}$ kg of chalk.

106. 800 kg of mortar consists of 55% sand, 33% cement and rest lime. What is the mass of lime in mortar?

107. In a furniture shop, 24 tables were bought at the rate of Rs. 450 per table. The shopkeeper sold 16 of them at the rate of Rs. 600 per table and the remaining at the rate of 400 per table. Find her gain or loss percent.

108. Medha deposited 20% of her money in a bank. After spending 20% of the remainder, she has Rs. 4800 left with her. How much did she originally have?

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109. The cost of a flower vase got increased by 12%. If the current cost is Rs. 896, what was its original cost?

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110. Radhika borrowed Rs. 12000 from her friends. Out of which Rs. 4000 were borrowed at 18% and the remaining at 15% rate of interest per annum. What is the total interest after 3 years?

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111. A man travelled 60 km by car and 240 km by train. Find what per cent of total journey did he travel by car and what per cent by train?

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112. By selling a chair for Rs. 1440, a shopkeeper loses 10%. At what price did he buy it?

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113. Dhruvika invested money for a period from May 2006 to April 2008 at rate of 12% per annum. If interest received by her is Rs. 1620, find the money invested.

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114. A person wanted to sell a scooter at a loss of 25%. But at the last moment he changed his mind and sold the scooter at a loss of 20%. If the difference in the two SP's is Rs. 4000, then find the CP of the scooter.

115. The population of a village is 8000. Out of these, 80% are literate and of these literate people, 40% are women. Find the ratio of the number of literate women to the total population.

116. In an entertainment programme, 250 tickets of Rs. 400 and 500 tickets of Rs. 100 were sold. If the entertainment tax is 40% on ticket of Rs. 400 and 20% on ticket of Rs. 100, find how much entertainment tax was collected from the programme.

117. Bhavya earns Rs. 50,000 per month and spends 80% of it. Due to pay revision, her monthly income increases by 20% but due to price rise, she has to spend 20% more. Find her new savings.

118. In an examination, there are three papers each of 100 marks. A candidate obtained 53 marks in the first and 75 marks in the second paper. How many marks must the candidate obtain in the third paper to get an overall of 70 per cent marks?

119. Health Application

A doctor reports blood pressure in millimetres of mercury (mm Hg) as a ratio of systolic blood pressure to diastolic blood pressure (such as 140 over 80). Systolic pressure is measured when the heart beats, and diastolic pressure is measured when it rests. Refer to the table of blood

pressure ranges for adults.

Blood Pressure Ranges			
	Normal	Prehypertension	Hypertension (Very High)
Systolic	Under 120 mm Hg	120-139 mm Hg	140 mm Hg and above
Diastolic	Under 80 mm Hg	80-89 mm Hg	90 mm Hg and above

Manohar is a healthy 37 years old man whose blood pressure is in the normal category.

Calculate an approximate ratio of systolic to diastolic blood pressures in the normal range.

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120. Health Application

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Manohar is a healthy 37 years old man whose blood pressure is in the normal category.

If Manohar's systolic blood pressure is 102 mm Hg, use the ratio from part (a) to predict his diastolic blood pressure.

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121. Health Application

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Systolic	Under 120 mm Hg	120-139 mm Hg	140 mm Hg and above
Diastolic	Under 80 mm Hg	80-89 mm Hg	90 mm Hg and above

Manohar is a healthy 37 years old man whose blood pressure is in the normal category.

Calculate ratio of average systolic to average diastolic blood pressure in the prehypertension category.
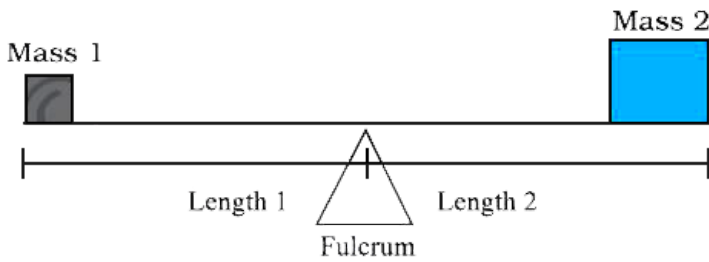
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122. The king cobra can reach a length of 558 cm. This is only about 60 per cent of the length of the largest reticulated python. Find the length of the largest reticulated python.

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123. Physical Science Application: Unequal masses will not balance on a fulcrum if they are at equal distance from it, one side will go up and the other side will go down.

Unequal masses will balance when the following proportion is true:

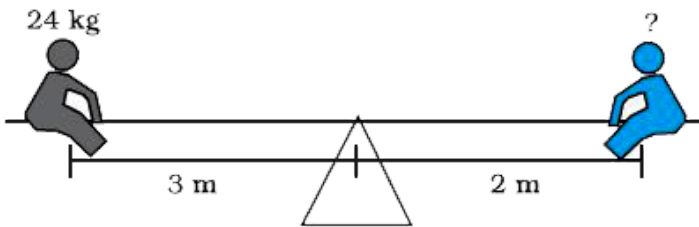$$\frac{\text{mass1}}{\text{length2}} = \frac{\text{mass2}}{\text{length1}}$$

Mass 2

Mass 1

Length 1   Length 2

Fulcrum

Two children can be balanced on a seesaw when

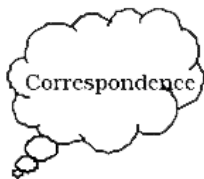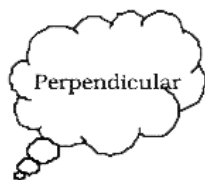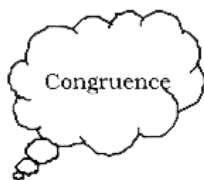$\dfrac{mass}{length2} = \dfrac{mass2}{length1}$. The child on the left and child on the right are balanced. What is the mass of the child on the right?
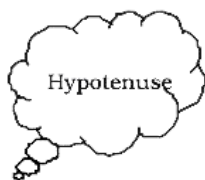

24 kg   ?

3 m   2 m

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124. Language Application

Given below are few Mathematical terms.

Hypotenuse Congruence Perpendicular

Transversal Correspondence

Find
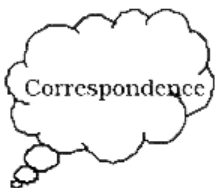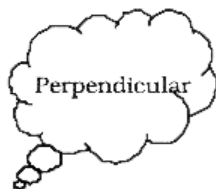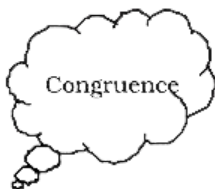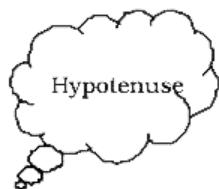
The ratio of consonants to vowels in each of the terms.

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125. Language Application

Given below are few Mathematical terms.

Hypotenuse Congruence Perpendicular

Transversal Correspondence

Find

The percentage of consonants in each of the terms.

126. What's the Error? An analysis showed that 0.06 per cent of the T-shirts made by one company were defective. A student says this is 6 out of every 100. What is the student's error?

127. What's the Error? A student said that the ratios $\frac{3}{4}$ and $\frac{9}{16}$ were proportional. What error did the student make?

128. What's the Error? A clothing store charges Rs. 1024 for 4 T-shirts. A student says that the unit price is Rs. 25.6 per T-shirt. What is the error?

What is the correct unit price?

129. A tea merchant blends two varieties of tea in the ratio of 5 : 4. The cost of first variety is Rs. 200 per kg and that of second variety is Rs. 300 per kg. If he sells the blended tea at the rate of Rs. 275 per kg, find out the percentage of her profit or loss.

130. A piece of cloth 5 m long shrinks 10 per cent on washing. How long will the cloth be after washing?

131. Nancy obtained 426 marks out of 600 and the marks obtained by Rohit are 560 out of 800. Whose performance is better?

132. A memorial trust donates Rs. 5,00,000 to a school, the interest on which is to be used for awarding 3 scholarships to students obtaining first three positions in the school examination every year. If the donation earns an interest of 12 per cent per annum and the values of the second and third scholarships are Rs. 20,000 and Rs. 15,000 respectively, find out the value of the first scholarship.

133. Ambika got 99 per cent marks in Mathematics, 76 per cent marks in Hindi, 61 per cent in English, 84 per cent in Science, and 95% in Social Science. If each subject carries 100 marks, then find the percentage of marks obtained by Ambika in the aggregate of all the subjects.

134. What sum of money lent out at 16 per cent per annum simple interest would produce Rs. 9600 as interest in 2 years?

135. Harish bought a gaschullah for Rs. 900 and later sold it to Archana at a profit of 5 per cent. Archana used it for a period of two years and later sold it to Babita at a loss of 20 per cent. For how much did Babita get it?

136. Match each of the entries in Column I with the appropriate entries in Column II:

	Column I
(i)	$3:5$
(ii)	3.5
(iii)	100%
(iv)	$\frac{2}{3}$
(v)	$6\frac{1}{4}\%$
(vi)	12.5%
(vii)	SP when CP $=$ Rs. 50 and loss $= 6\%$
$(viii)$	SP when CP $=$ Rs. 50 and profit $=$ Rs. 4
(ix)	Profit% when CP $=$ Rs. 40 and SP $=$ Rs. 50
(x)	Profit% when CP $=$ Rs. 50 and SP $=$ Rs. 60
(xi)	Interest when principal $=$ Rs. 800, Rate of interest $= 10\%$ per annu
(xii)	Amount when principal $=$ Rs. 150, Rate of interest $= 6\%$ per annun

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137. In a debate competition, the judges decide that 20 per cent of the total marks would be given for accent and presentation. 60 per cent of the rest are reserved for the subject matter and the rest are for rebuttal. If this means 8 marks for rebuttal, then find the total marks

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138. Divide Rs. 10000 in two parts so that the simple interest on the first part for 4 years at 12 per cent per annum may be equal to the simple interest on the second part for 4.5 years at 16 per cent per annum.

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139. Rs. 9000 becomes Rs. 18000 at simple interest in 8 years. Find the rate per cent per annum.

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140. In how many years will the simple interest on a certain sum be 4.05 times the principal at 13.5 per cent per annum?

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141. The simple interest on a certain sum for 8 years at 12 per cent per annum is Rs. 3120 more than the simple interest on the same sum for 5 years at 14 per cent per annum. Find the sum.

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142. The simple interest on a certain sum for 2.5 years at 12 per cent per annum is Rs. 300 less than the simple interest on the same sum for 4.5 years at 8 per cent per annum. Find the sum.

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143. 150 students are studying English, Maths or both. 62 per cent of the students are studying English and 68 per cent are studying Maths. How many students are studying both?

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144. Earth Science: The table lists the world's 10 largest deserts.

Largest Deserts in the World	
Desert	Area (km²)
Sahara (Africa)	8,800,000
Gobi (Asia)	1,300,000
Australian Desert (Australia)	1,250,000
Arabian Desert (Asia)	850,000
Kalahari Desert (Africa)	580,000
Chihuahuan Desert (North America)	370,000
Takla Makan Desert (Asia)	320,000
Kara Kum (Asia)	310,000
Namib Desert (Africa)	310,000
Thar Desert (Asia)	260,000

What are the mean, median and mode of the areas listed?

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145. Earth Science: The table lists the world's 10 largest deserts.

Largest Deserts in the World	
Desert	**Area (km²)**
Sahara (Africa)	8,800,000
Gobi (Asia)	1,300,000
Australian Desert (Australia)	1,250,000
Arabian Desert (Asia)	850,000
Kalahari Desert (Africa)	580,000
Chihuahuan Desert (North America)	370,000
Takla Makan Desert (Asia)	320,000
Kara Kum (Asia)	310,000
Namib Desert (Africa)	310,000
Thar Desert (Asia)	260,000

How many times the size of the Gobi Desert is the Namib Desert?

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146. Earth Science: The table lists the world's 10 largest deserts.

Largest Deserts in the World	
Desert	**Area (km²)**
Sahara (Africa)	8,800,000
Gobi (Asia)	1,300,000
Australian Desert (Australia)	1,250,000
Arabian Desert (Asia)	850,000
Kalahari Desert (Africa)	580,000
Chihuahuan Desert (North America)	370,000
Takla Makan Desert (Asia)	320,000
Kara Kum (Asia)	310,000
Namib Desert (Africa)	310,000
Thar Desert (Asia)	260,000

What percentage of the deserts listed are in Asia?

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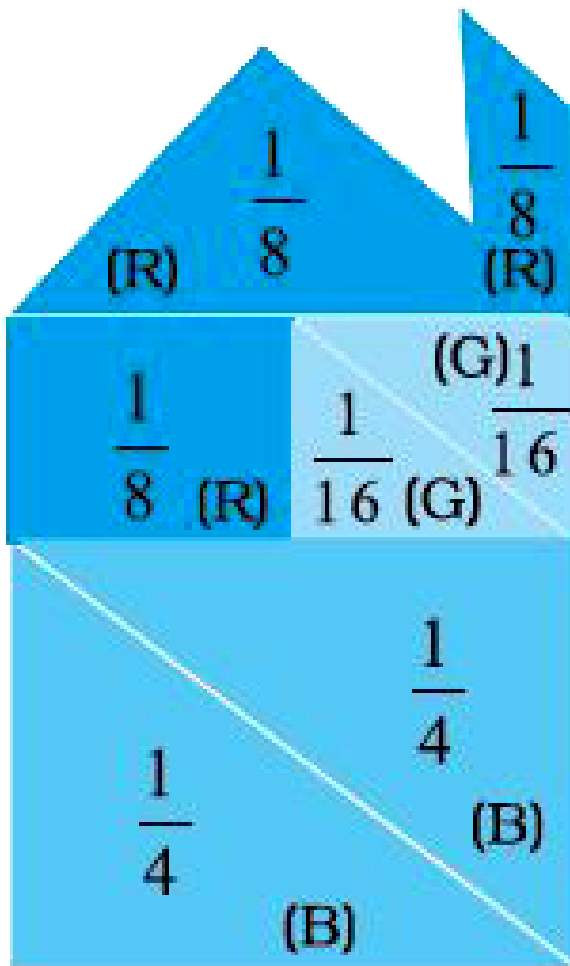**147.** Earth Science: The table lists the world's 10 largest deserts.

Largest Deserts in the World	
Desert	Area (km²)
Sahara (Africa)	8,800,000
Gobi (Asia)	1,300,000
Australian Desert (Australia)	1,250,000
Arabian Desert (Asia)	850,000
Kalahari Desert (Africa)	580,000
Chihuahuan Desert (North America)	370,000
Takla Makan Desert (Asia)	320,000
Kara Kum (Asia)	310,000
Namib Desert (Africa)	310,000
Thar Desert (Asia)	260,000

What percentage of the total area of the deserts listed is in Asia?

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148. The pieces of Tangrams have been rearranged to make the given shape.

By observing the given shape, answer the following questions:

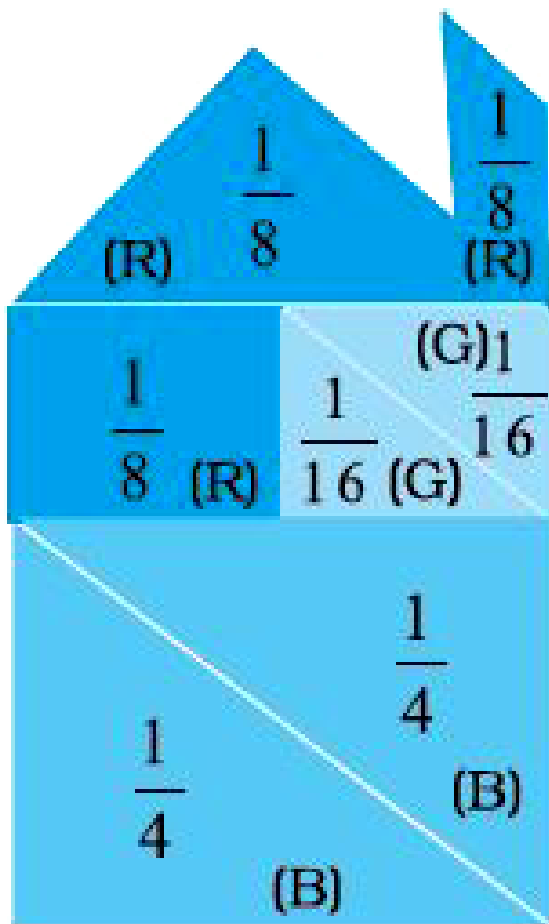What percentage of total has been coloured?

(i) Red (R) = _____

(ii) Blue (B) = _____

(iii) Green (G) = _____

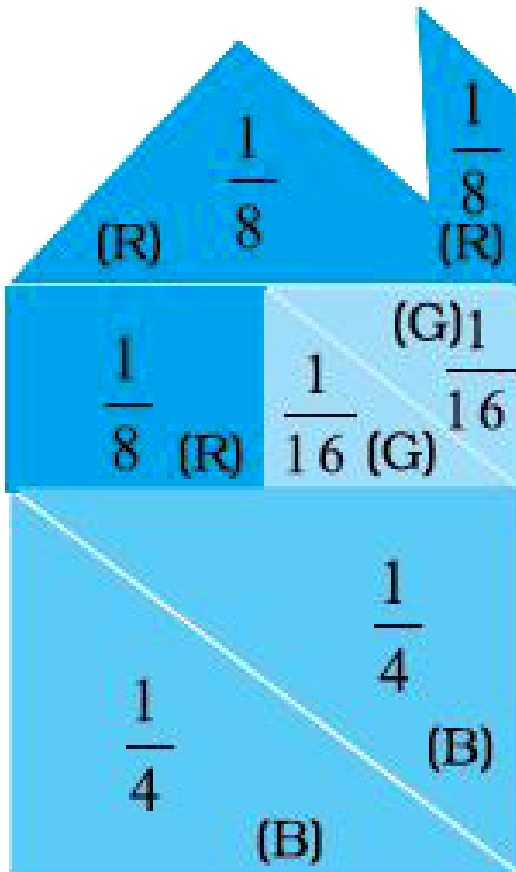**149.** The pieces of Tangrams have been rearranged to make the given shape.

By observing the given shape, answer the following questions:

Check that the sum of all the percentages calculated above should be 100.

150. The pieces of Tangrams have been rearranged to make the given shape.

By observing the given shape, answer the following questions:

If we rearrange the same pieces to form some other shape, will the percentatge of colours change?

Think And Discuss

1. Describe how two ratios can form a proportion.

2. Give three ratios equivalent to 12 : 24.

3. Explain why the ratios 2 : 4 and 6 :10 do not form a proportion.

4. Give an example of two ratios that are proportional and have numerators with different signs.

5. The speed of a Garden-Snail is 50 meters per hour and that of the Cheetah is 120 kilometers per hour. Find the ratio of the speeds.

6. Determine the ratios that are nearly equivalent to each of the following per cents : 23%, 53%, 65%, 12% and 76%.

7. Describe how to find 35% of a number when you know 10% of the number.

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8. Explain whether a 150% increase or a 150% decrease is possible.

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9. Compare finding a 20% increase for finding 120% of a number.

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10. Show Rs. 25 as a part of a 100 rupee note in terms of (1) a reduced fraction (2) a per cent and (3) a decimal. Which is most common?

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11. Explain how you can find a fraction, decimal, or per cent when you have only one form of a number.

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12. Show why 5% of a number is less than $\dfrac{1}{10}$ of the number.

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13. Demonstrate two ways to find 70% of a number.

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14. Name fractions in simplest form that are the same as 40% and as 250%.

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15. Compare finding a number when a per cent of the number is known to finding the per cent of one number with that of another number.

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16. Explain whether a number is greater than or less than 36, if 22 per cent of the number is 36.

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17. Explain the meaning of each variable in the interest formula.

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18. Tell what value should be used for time 't' in years when referring to 6 months.

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19. Name the different variables in the simple interest formula.

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20. Demonstrate that doubling the time while halving the interest rate results in the same amount of simple interest.

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21. Tell how finding commission is similar to finding sales tax.

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22. Explain whether adding 6 per cent sales tax to a total gives the same result as finding 106 per cent of the total or not.

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23. Explain how to find the price of an item if you know the total cost after 5 per cent sales tax.

24. Explain whether the sales tax on a Rs. 200 item would be double the sales tax on a Rs. 100 item. Justify your answer.