



MATHS

NCERT - NCERT

Mathematics(HINGLISH)

FRACTIONS AND DECIMALS

Exercise 2 5

1. (i) Express 5 cm in metre and kilometre (ii)

Express 35 mm in cm, m and km



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2. Express as rupees using decimals :(i) 7 paise (ii) 7 rupees 7 paise (iii) 77 rupees 77 paise (iv) 50 paise (v) 235 paise.



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3. Which is greater?

(i) 0.5 or 0.05

(ii) 0.7 or 0.5

(iii) 7 or 0.7

(iv) 1.37 or 1.49

(v) 2.03 or 2.30

(vi) 0.8 or 0.88.



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4. Write the place value of 2 in the following decimal numbers:(i) 2.56 (ii) 21.37 (iii) 10.25 (iv) 9.42 (v) 63.352.



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5. Dinesh went from place A to place B and from there to place C. A is 7.5 km from B and B is 12.7 km from C. Ayub went from place A to place D and from there to place C. D is 9.3 km from A and C is 11.8 km from D. Who travelled more and by how much?



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6. Express in kg: (i) 200 g (ii) 3470 g (iii)
4 kg 8 g (iv) 2598 mg



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7. Write the following decimal numbers in the expanded form: (i) 20.03 (ii) 2.03 (iii) 200.03 (iv) 2.034



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8. How much less is 28 km than 42.6 km?



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9. Shyama bought 5 kg 300 g apples and 3 kg 250 g mangoes. Sarala bought 4 kg 800 g oranges and 4 kg 150 g bananas. Who bought more fruits?



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Exercise 2 3

1. (i) $\frac{1}{4}$ of (a) $\frac{1}{4}$ (b) $\frac{3}{5}$ (c) $\frac{4}{3}$ (ii) $\frac{1}{7}$ of (a) $\frac{2}{9}$ (b) $\frac{6}{5}$ (c) $\frac{3}{10}$



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$$2. \text{ i) } \frac{2}{3} \times (2) \frac{2}{3}$$

$$\text{(ii) } \frac{2}{7} \times \frac{7}{9}$$

$$\text{(iii) } \frac{3}{8} \times \frac{6}{4}$$

$$\text{(iv) } \frac{9}{5} \times \frac{3}{5}$$

$$\text{(v) } \frac{1}{3} \times \frac{15}{8}$$

$$\text{(vi) } \frac{11}{2} \times \frac{3}{10}$$

$$\text{(vii) } \frac{4}{5} \times \frac{12}{7}$$



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3. For the fractions given below : (a) Multiply and reduce the product to lowest form (if possible) (b) Tell whether the fraction obtained is proper or improper. (c) If the fraction obtained is improper then convert it

into a mixed fraction. (i) $\frac{2}{5} \times (5)\frac{1}{4}$ (ii)

(6) $\frac{2}{5} \times \frac{7}{9}$ (iii) $\frac{3}{2} \times (5)\frac{1}{3}$ (iv) $\frac{5}{6} \times (2)\frac{3}{7}$ (v)

(3) $\frac{2}{5} \times \frac{4}{7}$ (vi) $(2)\frac{3}{5} \times 3$ (vii) $(2)\frac{3}{5} \times 3$ (viii)

(3) $\frac{4}{7} \times \frac{3}{5}$



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4. Which is greater :

$$\frac{2}{7} \text{ of } \frac{3}{4} \text{ or } \frac{3}{5} \text{ of } \frac{5}{8}$$

$$(ii) \frac{1}{2} \text{ of } \frac{6}{7} \text{ or } \frac{2}{3} \text{ of } \frac{3}{7}$$



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5. Saili plants 4 saplings, in a row, in her garden. The distance between two adjacent saplings is $\frac{3}{4}m$. Find the distance between the first and last sapling



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6. Lipika reads a book for $1\frac{3}{4}$ hours every day.

She reads the entire book in 6 days. How many hours in all were required by her to read the book?

A. $10\frac{1}{2}$

B. 10

C. 20

D. $\frac{11}{2}$

Answer: A



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7. A car runs 16km using 1 litre of petrol. How much distance will it cover using $(2)\frac{3}{4}$ liters of petrol.

A. 45km

B. 22km

C. 44km

D. 33km

Answer: C



8.

- (a) (i) Provide the number in the box , such that $\frac{2}{3} \times \square = \frac{10}{30}$.
- (ii) The simplest form of the number obtained in is _____.
- (b) (i) Provide the number in the box , such that $\frac{3}{5} \times \square = \frac{24}{75}$.
- (ii) The simplest form of the number obtained in is _____.



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Exercise 2 4

1. Find the reciprocal of each of the following fractions. Classify the reciprocals as proper fractions, improper fractions and whole numbers. (i) $\frac{3}{7}$ (ii) $\frac{5}{8}$ (iii) $\frac{9}{7}$ (iv) $\frac{6}{5}$ (v) $\frac{12}{7}$ (vi) $\frac{1}{8}$ (vii) $\frac{1}{11}$



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2. Find: (i) $\frac{12}{\frac{3}{4}}$



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3. Find : (i) $\frac{7}{3} \div 2$ (ii) $\frac{4}{9} \div 5$ (iii) $\frac{6}{13} \div 7$ (iv)
(4) $\frac{1}{3} \div 3$ (v) $3\frac{1}{2} \div 4$ (vi) $4\frac{3}{7} \div 7$



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4. Find the (i) $\frac{2}{5} \div \frac{1}{2}$ (ii) $\frac{4}{9} \div \frac{2}{3}$ (iii) $\frac{3}{7} \div \frac{8}{7}$
(iv) $2\frac{1}{3} \div \frac{3}{5}$ (v) $3\frac{1}{2} \div \frac{8}{3}$ (vi) $\frac{2}{5} \div 1\frac{2}{3}$ (vii)
 $3\frac{1}{5} \div 1\frac{2}{3}$ (viii) $2\frac{1}{5} \div 1\frac{1}{5}$



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1. Salil wants to put a picture in a frame. The picture is $(7)\frac{3}{5}cm$ wide. To fit the frame the picture cannot be more than $(7)\frac{3}{10}cm$ wide. How much should the picture be trimmed ?



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2. Ritu ate $\frac{3}{5}$ part of an apple and the remaining apple was eaten by her brother Somu. How much part of the apple did Somu eat?

A. $\frac{3}{5}$

B. 1

C. $\frac{1}{5}$

D. $\frac{2}{5}$

Answer: *D*



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3. A rectangular sheet of paper is $(12)\frac{1}{2}$ cm long and $(10)\frac{2}{3}$ cm wide. Find its perimeter.



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4. Find the perimeters of (i) $\triangle ABE$ (ii) the rectangle $BCDE$ in this figure. Whose perimeter is greater ?

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5. Arrange the following in descending order :

(i) $\frac{2}{9}$, $\frac{2}{3}$, $\frac{8}{21}$ (ii) $\frac{1}{5}$, $\frac{3}{7}$, $\frac{7}{10}$

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6. In a “magic square”, the sum of the numbers in each row, in each column and along the diagonal is the same. Is this a magic square?

4/11	9/11	2/11
3/11	5/11	7/11
8/11	1/11	6/11



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7. Solve

(i) $2 - \frac{3}{5}$

(ii) $4 + \frac{7}{8}$

(iii) $\frac{3}{5} + \frac{2}{7}$

$$(iv) \frac{9}{11} - \frac{4}{5}$$

$$(v) \frac{7}{10} + \frac{2}{5} + \frac{3}{2}$$

$$(vi) 2\frac{2}{3} + 3\frac{1}{2}$$

$$(vii) 8\frac{1}{2} - 3\frac{5}{8}$$



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8. Michael finished colouring a picture in $\frac{7}{12}$ hour. Vaibhav finished colouring the same picture in $\frac{3}{4}$ hour. Who worked longer ? By what fraction was it longer ?



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Solved Examples

1. Write five equivalent fractions of $\frac{3}{5}$.

A. $\frac{8}{10}$

B. $\frac{4}{10}$

C. $\frac{3}{8}$

D. $\frac{6}{10}$

Answer: *D*



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2. Sameera purchased $3\frac{1}{2}$ kg apples and $4\frac{3}{4}$ kg oranges. What is the total weight of fruits purchased by her?

A. $8\frac{1}{4}$

B. $\frac{1}{4}$

C. $\frac{7}{2}$

D. $4\frac{1}{8}$

Answer: A



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3. Ramesh solved $\frac{2}{7}$ part of an exercise while Seema solved $\frac{4}{5}$ of it. Who solved lesser part?

A. Seema

B. Ramesh

C. Both solved equal parts

D. Can not be decided

Answer: B



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4. In a class of 40 students $\frac{1}{5}$ of the total number of students like to study English, $\frac{2}{5}$ of the total number like to study mathematics and the remaining students like to study Science.



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5. Suman studies for $5\frac{2}{3}$ hours daily. She devotes $2\frac{4}{5}$ hours of her time for Science and

Mathematics. How much time does she devote for other subjects?



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6. The side of an equilateral triangle is 3.5 cm.

Find its perimeter



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7. Sushant reads $\frac{1}{3}$ part of a book in 1 hour.

How much part of the book will he read in

$2\left(\frac{1}{5}\right)$ hours?



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8. Find the average of 4.2, 3.8 and 7.6.



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9. The length of a rectangle is 7.1 cm and its breadth is 2.5 cm. What is the area of the rectangle?



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10. Each side of a regular polygon is 2.5 cm in length. The perimeter of the polygon is 12.5cm. How many sides does the polygon have?



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11. A car covers a distance of 89.1 km in 2.2 hours. What is the average distance covered by it in 1 hour?



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Exercise 2 7

1. Find:

(i) $0.4 \div 2$

(ii) $0.35 \div 5$

(iii) $2.48 \div 4$

(iv) $65.4 \div 6$

(v) $651.2 \div 4$

(vi) $14.49 \div 7$

(vii) $3.96 \div 4$

(viii) $0.80 \div 5$



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2. A fraction acts as an operator 'of'. For example, $\frac{1}{2}$ of 2 is $\frac{1}{2} \times 2 = 1$.



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3. (a) The product of two proper fractions is less than each of the fractions that are multiplied.

(b) The product of a proper and an improper

fraction is less than the improper fraction and greater than the proper fraction.

(c) The product of two improper fractions is greater than the two fractions.



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4. A reciprocal of a fraction is obtained by inverting it upside down.



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5. We now study the operations of multiplication and division on fractions as well as on decimals



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6. We have learnt how to multiply fractions. Two fractions are multiplied by multiplying their numerators and denominators separately and writing the product as product

of numerators product of denominators. For example,



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Exercise 2 2

1. Find

(a)(i) $\frac{1}{2}$ of $2\frac{3}{4}$ (ii) $\frac{1}{2}$ of $4\frac{2}{9}$

(b)(i) $\frac{5}{8}$ of $3\frac{5}{6}$ (ii) $\frac{5}{8}$ of $9\frac{2}{3}$



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2. Multiply and express as a mixed fraction :

(a) $3 \times 5\frac{1}{5}$

(b) $5 \times 6\frac{3}{4}$

(c) $7 \times 2\frac{1}{4}$

(d) $4 \times 6\frac{1}{3}$

(e) $3\frac{1}{4} \times 6$

(f) $3\frac{2}{5} \times 8$



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3. Find : (a) $\frac{1}{2}$ of (i) 24 (ii) 46 (b) $\frac{2}{3}$ of (i) 18 (c)

27 (d) $\frac{3}{4}$ of (i) 36 (d) $\frac{4}{5}$ of (i) 20 (ii) 35



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4. Multiply and reduce to lowest form :

(i) $7 \times \frac{3}{5}$

(ii) $4 \times \frac{1}{3}$

(iii) $2 \times \frac{6}{7}$

(iv) $\frac{2}{3} \times 4$

(v) $\frac{5}{2} \times 6$

(vi) $11 \times \frac{4}{7}$

(vii) $20 \times \frac{4}{5}$

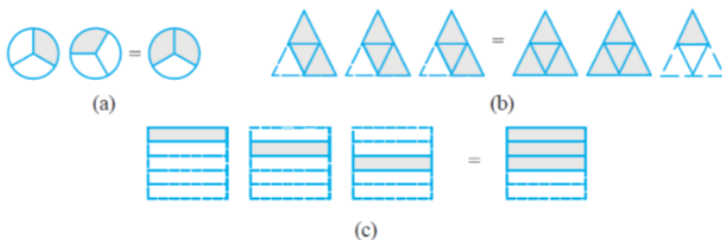
(viii) $13 \times \frac{1}{3}$

(ix) $15 \times \frac{3}{5}$



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5. Some pictures (a) to (c) are given below.



Tell which of them show (i) $3 \times \frac{1}{5} = \frac{3}{5}$ (ii)

$2 \times \frac{1}{3} = \frac{2}{3}$ (iii) $3 \times \frac{3}{4} = (2) \frac{1}{4}$



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6. Which of the drawings (a) to (d) show : (i)

$$2 \times \frac{1}{5} \quad \text{(ii)} \quad 2 \times \frac{1}{2} \quad \text{(iii)} \quad 3 \times \frac{2}{3} \quad \text{(iv)} \quad 3 \times \frac{1}{4}$$



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7. Vidya and pratap went from a picnic. their mother gave them a water bag that contained 5 litres of water. Vidya consumed $\frac{2}{5}$ of the water. Pratap consumed the remaining water.

(i) How much water did Vidya drink? (ii) What

fraction of the total quantity of water did
Pratap drink?



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Exercise 2 6

1. Find : (i) 368×10 (ii) 1537×10 (iii)
 16807×10 (iv) 311×100 (v) 1561×100 (vi)
 362×100 (vii) 4307×100 (viii) 05×10 (ix)
 09×100 (ix) 003×1000



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2. Find the area of rectangle whose length is 5.7cm and breadth is 3 cm.



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3. Find: (i) 0.2×6 (ii) 8×4.6 (iii) 2.71×5 (iv) 20.1×4 (v) 0.05×7 (vi) 211.02×4 (vii) 2×0.86



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4. A two-wheeler covers a distance of 55.3 km in one litre of petrol. How much distance will it cover in 10 litres of petrol?



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5. Find: (i) 2.5×0.3 (ii) 0.1×51.7 (iii) 0.2×316.8 (iv) 1.3×3.1 (v) 0.5×0.05 (vi) 11.2×0.15 (vii) 1.07×0.02 (viii) 10.05×1.05 (ix) 101.01×0.01 (x) 100.01×1.1



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