

Level 21 Card 1 All times tables should be known x2 – x12

1. Write in words:

- a) 54,209 b) 756,003 c) 1,000,000

2. Addition of whole numbers

Set these out first:

- a) $525 + 468 =$
b) $4,566 + 3,236 =$
c) $71,432 + 25,918 =$
d) $549,584 + 657,549 =$
e) $4,261,345 + 2,746,855 =$

3. Subtraction of whole numbers

Set these out first:

- a. $342 - 126 =$
b. $5,644 - 2,327 =$
c. $37,657 - 13,548 =$
d. $813,782 - 302,579 =$
e. $624,952 - 515,798 =$

Level 21 Card 2

1. Multiplication of whole numbers (Set out first)

- a) $34 \times 24 =$
b) $74 \times 46 =$
c) $345 \times 35 =$
d) $287 \times 64 =$
e) $62453 \times 35 =$
f) $42546 \times 23 =$
g) $358374 \times 32 =$
h) $413675 \times 36 =$

2. Multiplying by 10, 100 and 1000 (Look at the examples first):

$53 \times 10 = 530$... add 1 zero

$528 \times 100 = 52,800$... add two zeros

$7,031 \times 1,000 = 7,031,000$... add three zeros

Try these:

- a) $43 \times 10 =$ b) $76 \times 100 =$ c) $35 \times 1000 =$
d) $365 \times 10 =$ e) $374 \times 100 =$ f) $54 \times 1000 =$
g) $93,744 \times 10 =$ h) $32,81 \times 100 =$ i) $936,789 \times 1000 =$
j) $4,769 \times 10 =$ k) $791 \times 100 =$ l. $604,456 \times 1000 =$

Level 21 Card 3

Short division

Example:

$$362 \div 7 =$$

$$\begin{array}{r} 51 \text{ r}5 \\ 7 \overline{) 362} \end{array}$$

$$362 \div 7 = 51 \text{ r}5$$

Try these

$$3 \overline{) 701}$$

$$4 \overline{) 591}$$

$$4 \overline{) 781}$$

$$2 \overline{) 359}$$

$$9 \overline{) 958}$$

$$8 \overline{) 801}$$

$$7 \overline{) 755}$$

$$7 \overline{) 811}$$

$$5 \overline{) 514}$$

$$6 \overline{) 727}$$

$$6 \overline{) 920}$$

$$6 \overline{) 833}$$

$$9 \overline{) 923}$$

$$2 \overline{) 777}$$

$$9 \overline{) 933}$$

$$5 \overline{) 734}$$

$$5 \overline{) 562}$$

$$2 \overline{) 471}$$

$$3 \overline{) 473}$$

$$8 \overline{) 867}$$

Level 21 card 4

Vertical division (Long division)

Example:

$$\begin{array}{r} 0318 \text{ r}5 \\ 20 \overline{) 6365} \\ \underline{-60} \\ 36 \\ \underline{-20} \\ 165 \\ \underline{-160} \\ 5 \end{array}$$

Try these:

$$11 \overline{) 1089}$$

$$16 \overline{) 960}$$

$$17 \overline{) 1292}$$

$$25 \overline{) 1250}$$

$$27 \overline{) 1377}$$

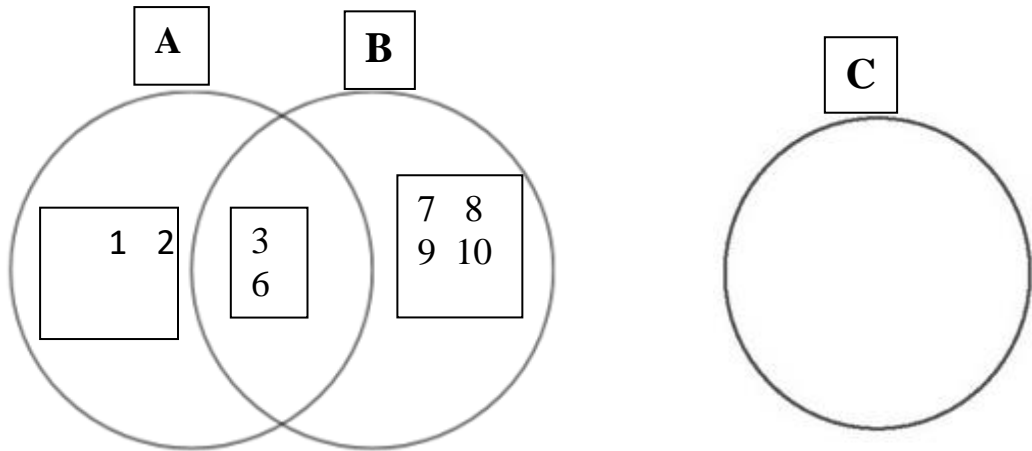
$$13 \overline{) 884}$$

$$21 \overline{) 798}$$

$$25 \overline{) 1050}$$

$$27 \overline{) 2052}$$

Level 21 Card 5
Sets



1. The elements of set A are
2. There are members in set A.
3. {3, 6, 7, 8, 9, 10} are elements of set
4. Set B has a number property of
5. Set $A \cup B = \{.....\}$ (*union*)
6. Set $A \cap B = \{.....\}$ (*intersection*)
7. There aremembers in set C.
8. Set C is aset or empty set. We write a null set as {}.
9. Write a set of Whole numbers less than 15.
{..... }

Level 21 Card 6

Reducing fractions to lowest terms

¹ $\frac{12}{18} =$	² $\frac{30}{36} =$	³ $\frac{3}{12} =$
⁴ $\frac{15}{25} =$	⁵ $\frac{3}{18} =$	⁶ $\frac{12}{24} =$
⁷ $\frac{6}{24} =$	⁸ $\frac{8}{16} =$	⁹ $\frac{6}{36} =$
¹⁰ $\frac{8}{10} =$	¹¹ $\frac{6}{30} =$	¹² $\frac{2}{12} =$

Level 21 Card 7
Multiplying fractions

Example:

$$\frac{1}{4} \times \frac{2}{3} = \frac{1 \times 2}{4 \times 3} = \frac{2}{12}$$

Try these:

1. $\frac{1}{3} \times \frac{2}{3} =$

2. $\frac{7}{8} \times \frac{2}{8} =$

3. $\frac{2}{3} \times \frac{2}{3} =$

4. $\frac{2}{5} \times \frac{3}{5} =$

5. $\frac{3}{5} \times \frac{4}{5} =$

6. $\frac{1}{5} \times \frac{1}{5} =$

7. $\frac{1}{4} \times \frac{1}{4} =$

8. $\frac{6}{8} \times \frac{6}{8} =$

9. $\frac{5}{6} \times \frac{3}{6} =$

10. $\frac{3}{8} \times \frac{5}{8} =$

11. $\frac{2}{4} \times \frac{3}{4} =$

12. $\frac{7}{8} \times \frac{3}{8} =$

13. $\frac{2}{6} \times \frac{4}{6} =$

14. $\frac{2}{3} \times \frac{1}{3} =$

Level 21 Card 8
Multiply these fractions
and reduce to lowest term.

1. $\frac{3}{4} \times \frac{2}{3} = \text{---} = \text{---}$

2. $\frac{7}{8} \times \frac{2}{5} = \text{---} = \text{---}$

3. $\frac{1}{4} \times \frac{5}{6} = \text{---} = \text{---}$

4. $\frac{2}{9} \times \frac{4}{5} = \text{---} = \text{---}$

5. $\frac{11}{12} \times \frac{5}{7} = \text{---} = \text{---}$

Example:

$$\frac{1}{4} \times \frac{2}{3} = \frac{1 \times 2}{4 \times 3} = \frac{2}{12} = \begin{matrix} \text{reduces} \\ \text{to} \end{matrix} \frac{1}{6}$$

Multiplying fractions by whole numbers

Hint: Write the whole numbers like this: e.g. $4 = \frac{4}{1}$

$$\frac{1}{2} \times 4 = \boxed{}$$

$$9 \times \frac{2}{3} = \boxed{}$$

$$\frac{7}{2} \times 8 = \boxed{}$$

Level 21 Card 9

Multiplying mixed numbers

Example:

$$1\frac{1}{2} \times 2\frac{1}{5} = 3\frac{3}{10}$$
$$\frac{3}{2} \times \frac{11}{5} = \frac{33}{10}$$

Do the multiplication as Improper Fractions

Try these:

1) $3\frac{3}{5} \times 3\frac{1}{3} =$

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

3) $3\frac{2}{3} \times 3\frac{4}{5} =$

4) $2\frac{2}{5} \times 4\frac{1}{5} =$

5) $4\frac{1}{2} \times 2\frac{3}{4} =$

6) $3\frac{1}{2} \times 2\frac{1}{4} =$

7) $4\frac{3}{5} \times 3\frac{1}{2} =$

8) $3\frac{1}{2} \times 4\frac{1}{3} =$

9) $2\frac{1}{2} \times 2\frac{2}{3} =$

10) $3\frac{1}{2} \times 4\frac{3}{4} =$

Level 21 Card 10

Division of fractions

Rule: flip the numerator and denominator of the second fraction and multiply, e.g.

$$\frac{3}{4} \div \frac{2}{3} = \frac{3}{4} \times \frac{3}{2}$$

Try these:

1) $\frac{2}{5} \div \frac{3}{4} =$

2) $\frac{2}{4} \div \frac{1}{2} =$

3) $\frac{4}{5} \div \frac{2}{3} =$

4) $\frac{2}{5} \div \frac{2}{3} =$

5) $\frac{2}{4} \div \frac{1}{5} =$

6) $\frac{3}{4} \div \frac{4}{5} =$

7) $\frac{1}{2} \div \frac{6}{10} =$

8) $\frac{1}{2} \div \frac{2}{3} =$

9) $\frac{2}{4} \div \frac{3}{10} =$

10) $\frac{2}{3} \div \frac{1}{5} =$

Level 21 Card 11

Fraction word problems

1. Tim was selling 32 coconuts at a road side. Three eighths of the coconuts were fresh bu (green coconuts juice) and the rest were matured coconuts. Half of the matured coconuts were big while the rest were small.

- How many coconuts were fresh bu?
- What fraction of the coconuts were matured coconuts?
- How many coconuts were matured and big?

2. Sara was selling 27 apples at the market. One third of the apples were green while the rest were red. Half of the red apples were sweet.

- How many apples were green?
- What fraction of the apples was red?
- How many apples were red?
- What fraction of the red apples was not sweet?
- How many apples were red and sweet?

3. Chan has 6 metres of shirt material. How many $1\frac{1}{2}$ metre pieces can he cut from the material?

4. Priya had 10 metres of ribbon. She wanted to cut it into $2\frac{1}{2}$ metre pieces. How many pieces of ribbon will she cut?

Level 21 Card 12

More word problems

- Ben made a garden 10 metres long. Later he decided to cut it up into small plots of $2\frac{1}{2}$ metres in length. How many plots can he make?
- A stick is $3\frac{1}{4}$ metres long and it needs to be cut equally into $\frac{1}{4}$ metre pieces. How many pieces can be cut from the stick?
- A hot water urn containing $10\frac{1}{2}$ litres of tea need to be poured out into $1\frac{1}{2}$ litre bottles. How many $1\frac{1}{2}$ litre bottles can be filled from the tea urn?
- Akuila was sent by his mum to buy $2\frac{1}{2}$ kg of potatoes. When he returned, his mum noticed that the price tag says 2kg. How many more grams of potatoes does Akuila have to buy?
- Sereana bought a big packet of chips with the weight of 750g. She ate some and gave the rest to her sister. Her sister weighs the packet and found out that it was 250g.
 - How much of the chips did Sereana eat? (answer in grams)
 - Did Sereana eat more chips or less than her sister?
- Pete went to bed at 8.45 p.m. and woke up at 6.15 a.m. the next day. How long did he sleep?
- The Pacific Transport bus left Suva at 9.15 a.m. and it reached Sigatoka at 11.30 a.m.
 - How long was the trip from Suva to Sigatoka?
 - What should have been the actual arrival time if a 15-minute delay occurred due to mechanical problems?

Level 21 Card 13
Word problems

Answer the questions below and calculate the average speed of the following events. **Average speed = distance ÷ time**

1. The Inter-City bus leaves Suva at 10.00 a.m. and reaches Nadi at 1.00 p.m. covering a distance of 219 km.

- i) How long did it take the bus to reach Nadi?
- ii) Find the average speed of the bus.

2. The Taunovo Bus leaves Navua at 9.15 a.m. and reaches Suva after twenty-five minutes of travelling fifty-five kilometers.

- i) How long is the journey?
- ii) What is the average speed?

3. A rental car leaves Nadi town at 10.20 a.m. and reaches Sigatoka at 10.45 a.m. covering a distance of 75 kilometres.

- i) How long is the drive?
- ii) Find the average of the car.

4. If Fiji's fastest man, Banuve Tabakaucoro, ran 100 metres in 10 seconds, find his average speed in metres per seconds?

Level 21 Card 14 Test *All times tables should be known*

- 1. Write in words: 154,209
- 2. Set out and multiply: $62453 \times 35 =$
- 3. In your head: $96 \times 1000 =$
- 4. Short division: $7 \overline{)755}$

5. Vertical division (long division): $16 \overline{)960}$

6. Reduce these fractions to their lowest terms:

a) $\frac{12}{16} = \frac{\quad}{\quad}$ b) $\frac{21}{24} = \frac{\quad}{\quad}$

7. Multiply these fractions and reduce the answer to lowest terms:

a) $\frac{4}{5} \times \frac{7}{8} = \frac{\quad}{\quad}$ b) $\frac{2}{3} \times \frac{3}{4} = \frac{\quad}{\quad}$

8. Multiply these mixed numbers:

a) $3\frac{1}{2} \times 2\frac{1}{4} =$ b) $3\frac{3}{5} \times 3\frac{1}{3} =$

9. Division of fractions:

a) $\frac{4}{5} \div \frac{2}{3} = \frac{\quad}{\quad} \times \frac{\quad}{\quad} = \frac{\quad}{\quad}$ b) $\frac{1}{2} \div \frac{1}{5} = \frac{\quad}{\quad} \times \frac{\quad}{\quad} = \frac{\quad}{\quad}$

10. Twelve friends plan to order pizza for dinner. They guessed that everyone would eat $\frac{1}{3}$ of a pizza. How many pizzas should they order?