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Additional Resources:

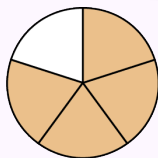
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1 1-minute Revision

Concept Review

- Use a fraction to express a **part of the whole**.
e.g.:



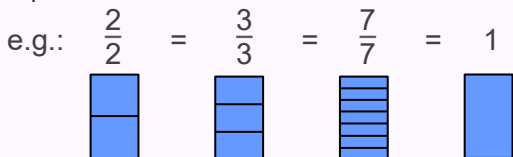
$\frac{4}{5}$

Numerator: The part that the coloured sections represent.

Denominator: The number of **equal sections** the whole is divided into.

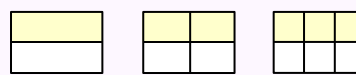
The coloured part is $\frac{4}{5}$ of the whole.

- When the numerator is the same as the denominator, the value of the fraction equals 1.



- When the fractions have the same value, they are called **equivalent fractions**.

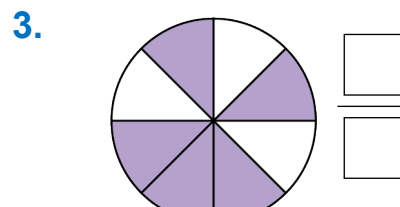
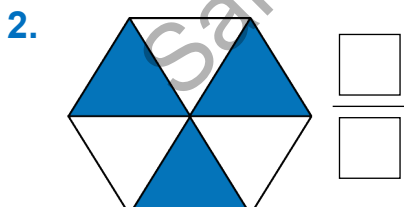
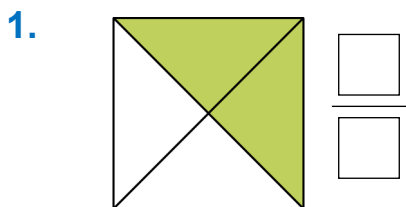
e.g.:

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


They are equivalent fractions.

2 Basic Practice

In each of the following, what fraction of the whole figure is coloured? Write the fraction and fill in the blank.

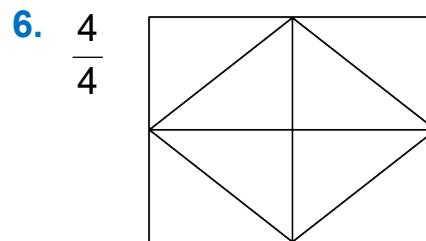
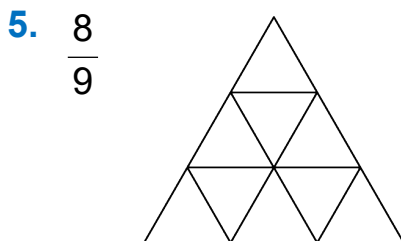
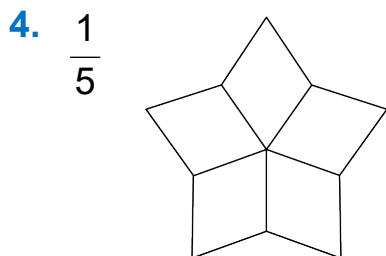


Read as: _____

Read as: _____

Read as: _____

In each of the following, colour the part of the figure according to the given fraction.



Fill in the boxes with the correct numbers.

7. $1 = \frac{\square}{10} = \frac{14}{\square}$

8. $\frac{21}{\square} = \frac{12}{12} = \frac{\square}{19}$

9. $\frac{8}{12} = \frac{\square}{3}$

10. $\frac{3}{5} = \frac{\square}{15}$

Date Time used

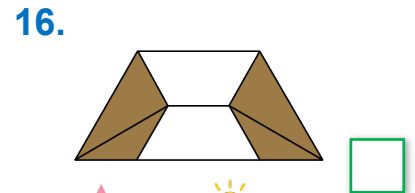
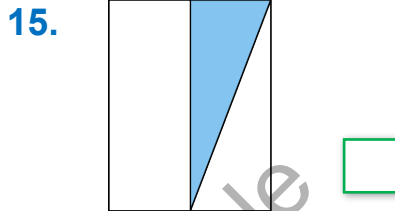
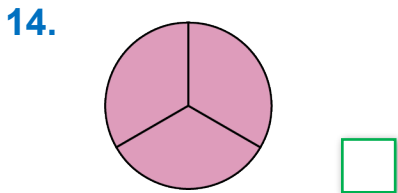
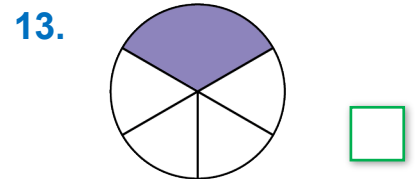
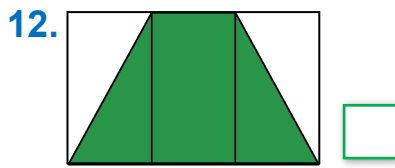
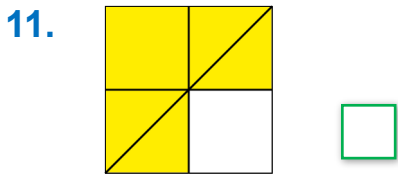
minutes

Marks **3****Advanced Practice**

In each of the following, what fraction of the whole figure is coloured?

Write down the correct letter in the .

- A. $\frac{1}{2}$ B. $\frac{1}{3}$ C. $\frac{1}{4}$ D. $\frac{3}{4}$ E. $\frac{4}{6}$ F. $\frac{6}{6}$

Blacken the next to the correct answer.

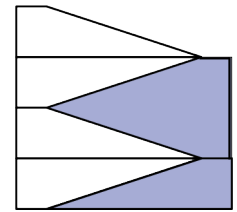
17. Which of the following is correct?

- A. $\frac{1}{9} = 1$ B. $\frac{9}{9} = 1$ C. $\frac{9}{9} = 9$ D. $\frac{1}{9} = 9$

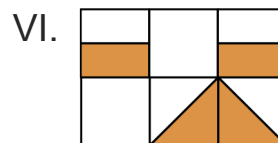
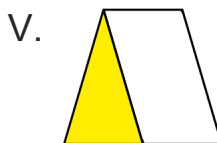
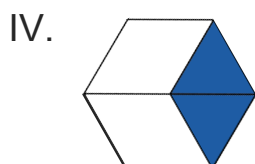
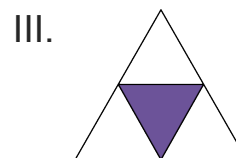
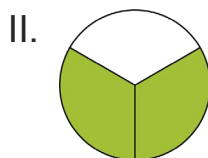
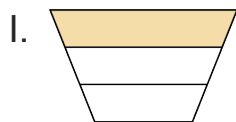


18. What fraction of the whole figure on the right is coloured?

- A. $\frac{2}{4}$ B. $\frac{2}{6}$
 C. $\frac{3}{7}$ D. $\frac{3}{8}$



Useful Tips How many trapeziums of the same size is this figure made up of?

19. Which of the following figures have $\frac{1}{3}$ of the whole figure coloured?

- A. I and II only B. I, III and IV only
 C. IV and V only D. IV, V and VI only

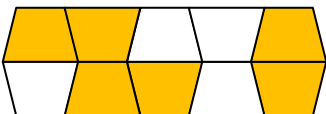
Assessment 2

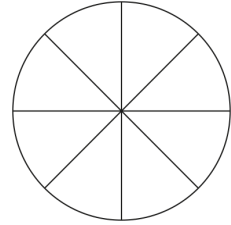
Time allowed:  30 min

Name: _____ Class: _____ () Date: _____

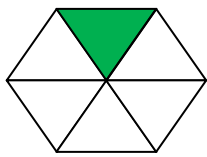
Assessment Points		Questions	Marks
Fractions	Recognise fractions, compare fractions, addition and subtraction of fractions with the same denominator	1–8	/ 32
Capacity	Recognise capacity, litres and millilitres	9–15	/ 32
Bar charts	Read and construct bar charts	16–22	/ 36
Total marks:			/ 100

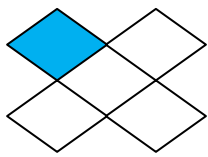
- Instructions**
- **Multiple choice questions:** Blacken the next to the correct answer.
 - **Questions in which you are asked to 'show your working':**
Write your mathematical expressions, answers, and statements / conclusions.
 - **Other types of questions:** Answer as required in the spaces provided.

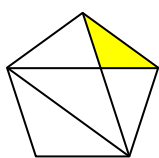
1.  The coloured part is / of the whole figure.

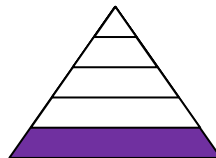
2. Kenny divided a pizza into 8 equal pieces. Then he ate 3 pieces. He ate / of the pizza. 

3. Which of the following figures has the coloured part **larger than** $\frac{1}{5}$ of the whole figure? 4M

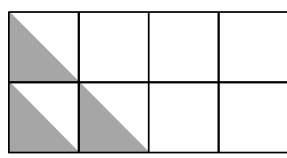
A. 

B. 

C. 

D. 

4. The figure on the right is made up of squares of the same size. Some of them are shaded. Use a pencil to shade the squares so that $\frac{9}{16}$ of the whole figure is shaded. 6M



Marks

2M

2M

4M

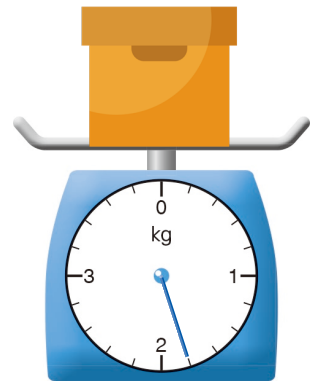
6M

Cross-topic Exercise

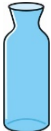

Complete the following.

1. The rates of a courier company are shown below.



Weight	Fee
First 1 kg	\$32
Every 100 g thereafter	\$6



- The weight of the parcel on the right is _____ g.
- If Mr Chan sends out the parcel, how much should he pay? (Show your working)

2.  of water can fill up .

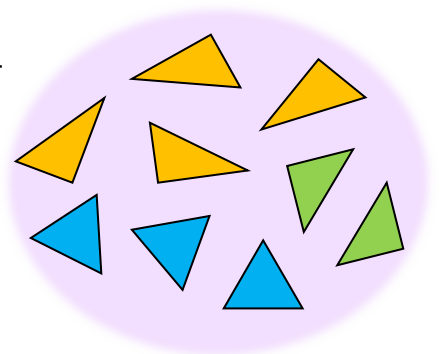
 of water can fill up .

The capacity of  is $\frac{\square}{\square}$ of .

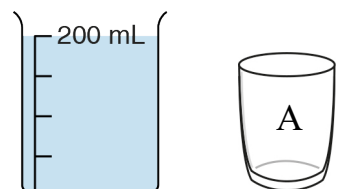
3. a. Among the triangles on the right, there are _____ equilateral triangles and _____ right-angled triangles.

b. $\frac{\square}{\square}$ of all the triangles are equilateral triangles.

c. $\frac{\square}{\square}$ of all the isosceles triangles are equilateral triangles.



4. Katy poured $\frac{1}{4}$ of the water in the measuring cup on the right into glass A.



a. Glass A contains _____ mL of water now.

b. _____ mL of water are left in the measuring cup.

Unit 1: Mixed operations of addition and subtraction (Exercises 1-3)

1. Addition and subtraction

• Addition

$$\begin{array}{r} 1\ 9\ 5\ 2 \\ + 2\ 1\ 1\ 5\ 3 \\ \hline 4\ 1\ 0\ 5 \end{array}$$

- Put the digits in the correct places.
- Add the digits in the units place, tens place, hundreds place and thousands place in order.

Pay attention to carrying.

• Subtraction

$$\begin{array}{r} 2\ 11 \\ \cancel{3}\ \cancel{1}\ 4\ 7 \\ - 2\ 8\ 4\ 2 \\ \hline 3\ 0\ 5 \end{array}$$

- Put the digits in the correct places.
- Subtract the digits in the units place, tens place, hundreds place and thousands place in order.

Pay attention to borrowing.

2. Mixed operations of addition and subtraction

- Do the calculation from left to right.
- When it is not enough to subtract, add first and then subtract.

$$\begin{aligned} & 3620 - 1548 + 4372 \\ & = 2072 + 4372 \\ & = 6444 \end{aligned}$$

$$\begin{aligned} & 3620 - 5148 + 4372 \\ & = 3620 + 4372 - 5148 \\ & = 7992 - 5148 \\ & = 2844 \end{aligned}$$

3. Brackets

- () is a pair of brackets. When there is a pair of brackets, we do the calculations in the brackets first.

$$\begin{aligned} & 125 + (360 - 212) \\ & = 125 + 148 \\ & = 273 \end{aligned}$$

$$\begin{aligned} & 243 - (80 + 5) \\ & = 243 - 85 \\ & = 158 \end{aligned}$$

Unit 2: Four arithmetic operations (Exercises 4-6)

1. Mixed operations of addition and multiplication

- Do the multiplication first and then the addition.
- Do the calculation in the brackets first.

$$\begin{aligned} & 60 + 15 \times 4 \\ & = 60 + 60 \\ & = 120 \end{aligned}$$

$$\begin{aligned} & 60 + (25 + 15) \times 4 \\ & = 60 + 40 \times 4 \\ & = 60 + 160 \\ & = 220 \end{aligned}$$

Dress B and trousers C cost \$530 in total originally.

$$530 - 50 = 480$$

After the reduction of \$50, \$480 should be paid. \$480 is smaller than \$493. Thus, the cheapest combination will be dress B and trousers C. (Accept any reasonable explanation)

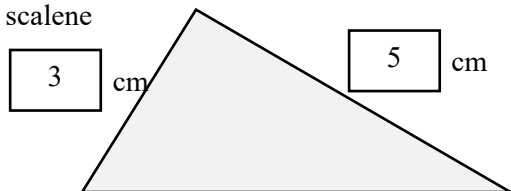
Common mistake 1:

- Forget to write the answer to respond to the question.

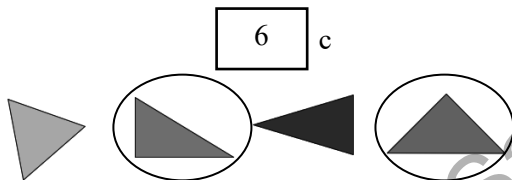
Common mistake 2: The cheapest combination will be dress A and trousers C. ✘

- Neglect 'Get \$50 off on purchases over \$500'.

19. scalene

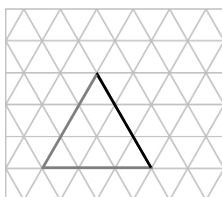


20.

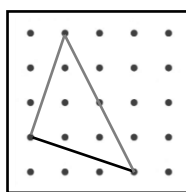


21. isosceles

22. a.



b.



(Accept any reasonable answers)

23. a. ✓
 b. ✓
 c. ✓
 d. ✓
 e. ✘
 f. ✘

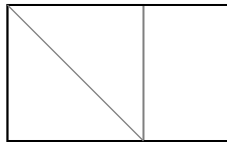
24. A, C

[Option B: $9 + 9 = 18$, the total length of the 2 shorter sticks is equal to the length of the longest stick. Thus, a triangle cannot be formed.]

Common mistake: B ✘

- Neglect that the total length of the 2 shorter sides of a triangle must be longer than the longest side.

25.



(Accept any reasonable answers)

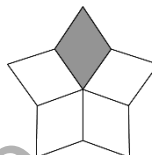
11 Fractions (1)

1. $\frac{2}{4}$; two fourths

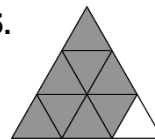
2. $\frac{3}{6}$; three sixths

3. $\frac{5}{8}$; five eighths

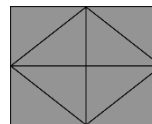
4.



5.



6.



(4-5 Accept any reasonable answers)

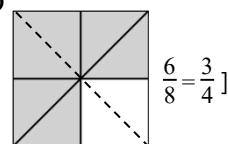
7. $\frac{10}{10}$, $\frac{14}{14}$

8. $\frac{21}{21}$, $\frac{19}{19}$

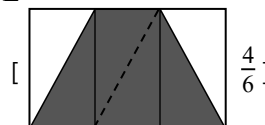
9. $\frac{2}{3}$

10. $\frac{9}{15}$

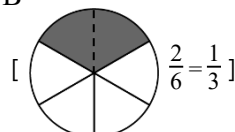
11. D



12. E

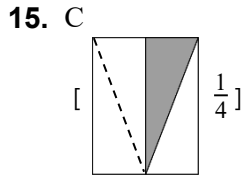


13. B



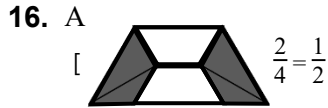
14. F

$$\left[\frac{3}{3} = \frac{6}{6} = 1 \right]$$



Common mistake: $\frac{1}{3}$ *

- Neglect that each part of a fraction should be equal.

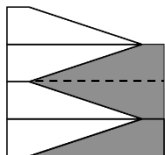


The shape is made up of 4 trapeziums of the same size.
The coloured parts occupy 2 trapeziums.]

17. B
MCQ Explanation

Wrong choice	Reason
A	Mistakenly regard that one of the 9 equal parts is 1.
C	Mistakenly regard that nine of the 9 equal parts is 9.
D	Mistakenly regard that 9 equal parts are 9.

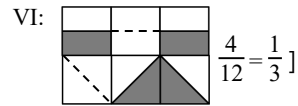
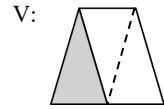
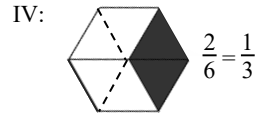
18. C
[Divide the figure into 7 equal parts. The coloured parts occupy 3 equal parts.]



MCQ Explanation

Wrong choice	Reason
A	Neglect that each part of a fraction is equal.
B	Neglect that each part of a fraction is equal.
D	Mistakenly regard that the following figure is the whole figure.

19. D
[I: not 3 equal parts
II: $\frac{2}{3}$
III: $\frac{1}{4}$

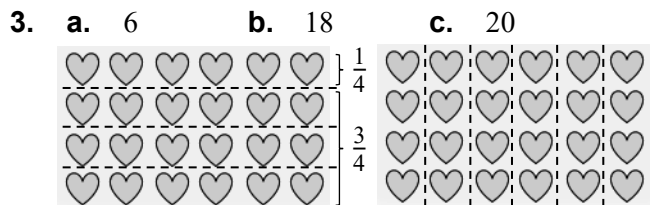
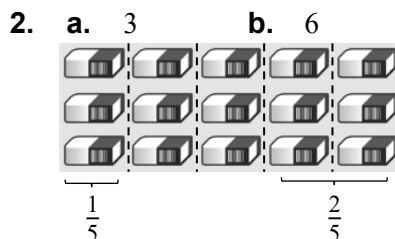


MCQ Explanation

Wrong choice	Reason
A	I: Neglect that each part of a fraction is equal, and II: Mistake the fraction that the white part of the whole figure represents is the fraction that the coloured part of the whole figure represents.
B	I: Neglect that each part of a fraction is equal, and III: Mistake the white part as the denominator and the coloured part as the numerator, or wrongly count the number of equal parts.
C	Neglect the coloured part of figure VI is $\frac{4}{12}$ of the whole figure, that is $\frac{1}{3}$.

12 Fractions (2)

1. a. $\frac{3}{9}$ or $\frac{1}{3}$ b. $\frac{4}{9}$ c. $\frac{2}{9}$



4. $\frac{5}{11}$ $\frac{5}{6}$

5. a. 4 b. $\frac{2}{4}$ [$\frac{8}{16} = \frac{2}{4}$]

6. a. 6 b. $\frac{2}{5}$