

Name: _____

Date: _____

Section A — Fluency

Use the diagrams to help. Circle or write your answers.

1. What fraction of this shape is shaded?



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

B. $\frac{3}{4}$

C. $\frac{2}{4}$

D. $\frac{4}{3}$

2. What fraction of this bar is shaded?



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

B. $\frac{5}{8}$

C. $\frac{5}{6}$

D. $\frac{8}{5}$

3. Write $\frac{3}{4}$ as a decimal. _____

4. Write 0.5 as a fraction in simplest form. _____

5. Put these fractions in order from **smallest to largest**: $\frac{7}{10}$, $\frac{3}{10}$, $\frac{9}{10}$, $\frac{1}{10}$

6. What fraction does the gold dot show on this number line? The line is divided into **eighths**.



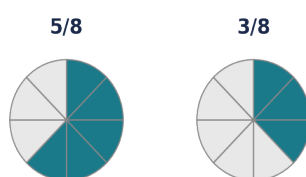
7. Fill in the missing number: $\frac{1}{2} = \frac{\blacksquare}{8}$

8. Put these decimals in order from **largest to smallest**: 0.75, 0.3, 0.50, 0.9

■ ■ Section B — Understanding

Show your working. Use diagrams where they help.

9. Choose the correct sign to compare these fractions.



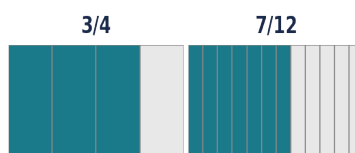
A. $5/8 < 3/8$

B. $5/8 > 3/8$

C. $5/8 = 3/8$

D. None of these

10. Look at the two bar models. Which fraction is larger?



A. $3/4$

B. $7/12$

C. They are equal

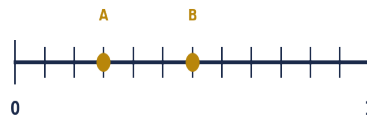
D. Cannot tell

11. Liam says **$1/3$ is bigger than $1/2$** because 3 is bigger than 2. Is Liam correct? Explain why or why not. You may draw a diagram.

12. Write **three fractions** that are equivalent to $1/2$. Explain how you know they are equal.

13. A pizza is cut into **10 equal slices**. Priya eats 3 slices and Tom eats 4 slices. What fraction of the pizza is left? Write your answer as a fraction **and** a decimal.

14. The number line below goes from 0 to 1 and is divided into **twelfths**. Write the fractions at points A and B. Then write each fraction in its simplest form.



15. Explain why **0.25** and **$\frac{1}{4}$** are the same amount. Use a diagram or number line to prove it.

■ ■ Section C — Application

Read each problem carefully. Show all working.

16. A jug holds 1 litre of juice. Mum pours out **$\frac{3}{10}$** of a litre for breakfast and **$\frac{2}{10}$** for lunch. What fraction of the juice is left? Write your answer as a fraction and a decimal.
17. A ribbon is **1 metre** long. Emma cuts off 0.25 metres for a bow and 0.40 metres for a headband. How many centimetres of ribbon remain? Show your working.
18. A class of **24 students** takes a survey. One quarter like swimming best, one third like basketball, and the rest like soccer. How many students chose each sport?
19. Dad buys a block of chocolate with **20 squares**. He gives $\frac{1}{4}$ of the block to Mia, $\frac{3}{10}$ of the block to Jack, and keeps the rest. How many squares does each person get? Who gets the most?
20. Which list shows these numbers in order from **smallest to largest**? 0.6, $\frac{1}{4}$, $\frac{3}{5}$, 0.75

A. 0.6, $\frac{1}{4}$, $\frac{3}{5}$, 0.75B. $\frac{1}{4}$, $\frac{3}{5}$, 0.6, 0.75C. $\frac{1}{4}$, 0.6, $\frac{3}{5}$, 0.75D. $\frac{3}{5}$, 0.6, $\frac{1}{4}$, 0.75

21. A farmer plants $\frac{1}{3}$ of his field with wheat and $\frac{1}{4}$ with corn. Has he planted **more or less** than half the field? Show your working using diagrams, fractions, or decimals.

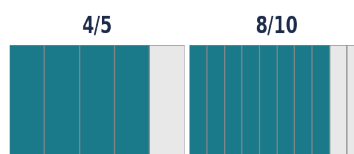
■ ■ Section D — Reasoning & Challenge

Explain your thinking clearly. These questions are designed to stretch your skills.

22. Zoe ate $\frac{3}{8}$ of a cake. Tom ate $\frac{5}{12}$ of the same-sized cake. Who ate more? Show how you can compare these fractions even though they have **different denominators**. (Hint: can you find a common denominator?)

23. I am a fraction less than 1. My numerator is 3. My denominator is an even number less than 10. I am **bigger than $\frac{1}{2}$** . What fraction could I be? Find **all** possible answers and explain.

24. Look at these two bar models. Amir says **$\frac{8}{10}$ is bigger than $\frac{4}{5}$** because 8 is bigger than 4 and 10 is bigger than 5. Is Amir correct? Explain what is really going on.



25. Find a fraction that is **exactly halfway** between $\frac{1}{4}$ and $\frac{3}{4}$. Then find a fraction exactly halfway between $\frac{1}{4}$ and $\frac{1}{2}$. Draw a number line to prove both answers.

26. Write each set of fractions in order from smallest to largest. These have **different denominators** — convert them first. **a)** $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$, $\frac{7}{12}$ **b)** $\frac{1}{2}$, $\frac{2}{5}$, $\frac{7}{10}$, $\frac{3}{20}$

■ CHALLENGE EXTENSION — Above Year Level

These questions push beyond Year 4. Give them a go if you finished early or want an extra challenge!

E1. A recipe uses $\frac{3}{4}$ of a cup of flour and $\frac{2}{3}$ of a cup of sugar. Which ingredient does the recipe use more of, and by how much? Express your answer as a fraction of a cup.

E2. Convert these fractions to decimals, then order from smallest to largest: $\frac{3}{8}$, $\frac{5}{16}$, $\frac{7}{20}$, $\frac{11}{40}$. You may use long division or find a common denominator.

E3. Marcus says "there is no fraction between $\frac{3}{7}$ and $\frac{4}{7}$ because there's no whole number between 3 and 4." Prove Marcus wrong by finding at least **two fractions** between $\frac{3}{7}$ and $\frac{4}{7}$. Explain your method.
