Merit Tutoring

WORKSHEET 19

Comparing Fractions

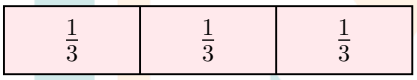
Year 5 Mathematics — Fractions Strand

Australian Curriculum v9.0 — AC9M5N03

Name: _____ **Date:** _____

KEY CONCEPT: When comparing fractions with the **same denominator**, the fraction with the larger numerator is bigger. When denominators are different, we need to find **equivalent fractions** with related denominators!

Visual Guide:

1 whole = 

Each piece is $\frac{1}{3}$

Section 1: Fluency - Same Denominators

Question 1: Which is larger?

$$\frac{4}{7}$$

or

$$\frac{2}{7}$$

. Use $<$ or $>$.

Answer: _____

Question 2: Which is smaller?

$$\frac{5}{9}$$

or

$$\frac{8}{9}$$

.

Answer: _____

Question 3: Order these fractions from smallest to largest:

$$\frac{5}{10}, \frac{2}{10}, \frac{9}{10}, \frac{1}{10}$$

Answer: _____

Question 4: Compare using $<$, $>$, or $=$:

$\frac{3}{8}$ ____ $\frac{7}{8}$

Answer: _____

Question 5: Which fraction is closest to 1 whole?

$\frac{2}{5}$, $\frac{3}{5}$, or $\frac{4}{5}$

Answer: _____

Question 6: Order from largest to smallest:

$$\frac{1}{6}, \frac{4}{6}, \frac{2}{6}, \frac{5}{6}$$

Answer: _____

Question 7: True or False:

$$\frac{6}{11} > \frac{9}{11}$$

Answer: _____

Question 8: Which is smaller?

$$\frac{7}{12}$$

or

$$\frac{11}{12}$$

Answer: _____

Fraction Frog Says:

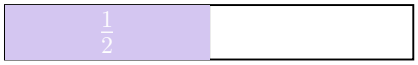
"You're a Fraction Fanatic!"

Joke Time: Why was the fraction worried about marrying the decimal?
Because she would have to convert!

Section 2: Reasoning - Related Denominators

KEY CONCEPT: To compare fractions with different denominators, we convert them to **equivalent fractions** with the same denominator!

Question 9: Look at these fraction bars:

Bar 1: 

Bar 2: 

Bar 1 shows $\frac{1}{2}$ shaded. Bar 2 shows $\frac{3}{4}$ shaded. Which fraction is larger?

Answer: _____

Question 10: Use your knowledge of multiples to compare $\frac{1}{3}$ and $\frac{2}{6}$. Are they equal?

Answer: _____

Question 11: Which is larger? $\frac{1}{2}$ or $\frac{2}{5}$

Hint: Convert $\frac{1}{2}$ to tenths and $\frac{2}{5}$ to tenths.

Answer: _____

Question 12: Compare: $\frac{1}{4}$ 4

____ $\frac{2}{8}$

Answer: _____

Question 13: Order from smallest to largest:

$\frac{1}{2}, \frac{1}{4}, \frac{3}{4}$

Answer: _____

Question 14: Which is greater?

$\frac{2}{3}$

or

$\frac{5}{6}$

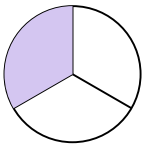
Hint: Convert

$\frac{2}{3}$

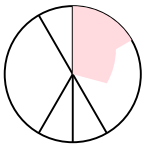
to sixths.

Answer: _____

Question 15: Circle fractions are shown below. Which is larger?



$\frac{1}{3}$



$\frac{2}{6}$

Answer: _____

Denominator Dragon Says:

"You're an Equivalent Expert!"

Joke Time: What do you call a fraction with a cold?
A-choo over two!

Section 3: Challenge - Mixed Numerals

KEY CONCEPT: A **mixed numeral** has a whole number and a fraction (e.g., $1\frac{1}{2}$ means 1 whole and a half).

Question 16: Which is greater: $1\frac{1}{2}$ or $1\frac{1}{4}$? Explain how you know.

Answer: _____

Question 17: Order from smallest to largest:

$$2\frac{1}{4}, 1\frac{3}{4}, 2\frac{3}{4}$$

Answer: _____

Question 18: Compare:

$1\frac{2}{5}$

____

$1\frac{4}{5}$

Answer: _____

Question 19: Which is larger?

$$2\frac{1}{3}$$

or

$$2\frac{2}{6}$$

Answer: _____

Question 20: True or False:

$$3\frac{1}{2} > 3\frac{3}{4}$$

Answer: _____

Question 21: A pizza was cut into 8 slices. Tom ate

$$1\frac{3}{8}$$

pizzas and Sarah ate

$$1\frac{5}{8}$$

pizzas. Who ate more?

Answer: _____

Question 22: Order these mixed numerals from largest to smallest:

$$2\frac{1}{2}, 3\frac{1}{4}, 2\frac{3}{4}, 3\frac{1}{2}$$

Answer: _____

Numerator Ninja Says:

"You're a Mixed Numeral Master!"

Joke Time: Why did the fraction go to the gym?
To get toned and proper!

Great work! Check your answers on the next page.

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WORKSHEET 19
ANSWER KEY

Section 1: Fluency - Same Denominators

1.

$$\frac{4}{7} > \frac{2}{7}$$

2.

$$\frac{5}{9}$$

is smaller

3.

$$\frac{1}{10}, \frac{2}{10}, \frac{5}{10}, \frac{9}{10}$$

4.

$$\frac{3}{8} < \frac{7}{8}$$

5.

$$\frac{4}{5}$$

(closest to 1 whole)

6.

$$\frac{5}{6}, \frac{4}{6}, \frac{2}{6}, \frac{1}{6}$$

7. False (

$$\frac{6}{11} < \frac{9}{11}$$

)

8.

$$\frac{7}{12}$$

is smaller

Section 2: Reasoning - Related Denominators

9.

$$\frac{3}{4}$$

is larger (

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

9

, and $\frac{3}{4} > \frac{2}{4}$)

10. Yes, they are equal ($\frac{1}{3} = \frac{2}{6}$)

11. $\frac{1}{2}$ is larger ($\frac{1}{2} = \frac{5}{10}$ and $\frac{2}{5} = \frac{4}{10}$, so $\frac{5}{10} > \frac{4}{10}$)

12. $\frac{1}{4} = \frac{2}{8}$

13. $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$

14. $\frac{5}{6}$ is greater ($\frac{2}{3} = \frac{4}{6}$, and $\frac{5}{6} > \frac{4}{6}$)

15. They are equal ($\frac{1}{3} = \frac{2}{6}$)

Section 3: Challenge - Mixed Numerals

16.

$$1\frac{1}{2}$$

is greater (both have 1 whole, but

$$\frac{1}{2} > \frac{1}{4}$$

)

17.

$$1\frac{3}{4}, 2\frac{1}{4}, 2\frac{3}{4}$$

18.

$$1\frac{2}{5} < 1\frac{4}{5}$$

19. They are equal (

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

, so

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

)

20. False (

$$3\frac{1}{2} < 3\frac{3}{4}$$

)

21. Sarah ate more (

$$1\frac{5}{8} > 1\frac{3}{8}$$

)

22.

$$3\frac{1}{2}, 3\frac{1}{4}, 2\frac{3}{4}, 2\frac{1}{2}$$

WORKSHEET 20

Fractions on Number Lines

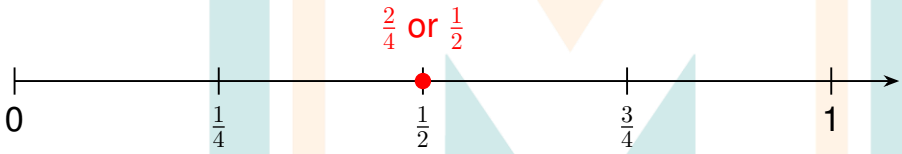
Year 5 Mathematics — Fractions Strand

Australian Curriculum v9.0 — AC9M5N03

Name: _____ **Date:** _____

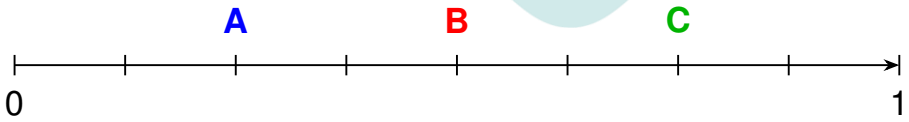
KEY CONCEPT: Number lines help us visualize where fractions sit between whole numbers. Fractions close to 0 are small, and fractions close to 1 are nearly a whole!

Example Number Line:



Section 1: Fluency - Identifying Positions

Question 1: Look at this number line:



What fraction is represented by the letter B?

Answer: _____

Question 2: On the same number line above, what fraction is at letter A?

Answer: _____

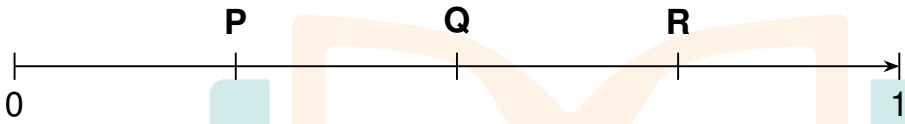
Question 3: What fraction is at letter C?

Answer: _____

Question 4: This number line shows quarters. Which letter is at

$$\frac{3}{4}$$

?

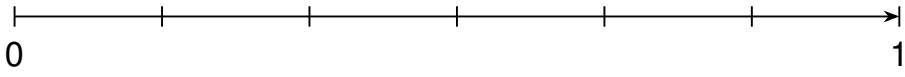


Answer: _____

Question 5: On the number line below, what fraction is marked?

Answer: _____

Question 6: This number line is divided into sixths. What is the first tick mark after 0?



Answer: _____

Question 7: On a number line divided into tenths, where would

$$\frac{7}{10}$$

be located?

Answer: _____

Question 8: True or False: On a number line from 0 to 1,

$$\frac{1}{2}$$

is exactly in the middle.

Answer: _____

Number Line Ladybug Says:

"You're a Position Perfect Pro!"

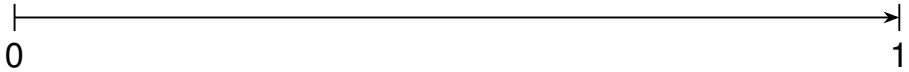
Joke Time: Why did the fraction get lost?
It couldn't find its place on the line!

Section 2: Reasoning - Placing Fractions

Question 9: Mark the position of

$$\frac{1}{2}$$

on this number line:



Question 10: Mark the positions of

$$\frac{1}{4}$$

,

$\frac{1}{2}$

, and

$\frac{3}{4}$

on this number line:

Question 11: On this number line from 0 to 2, mark the positions of

$\frac{1}{2}$

,

$1\frac{1}{4}$

, and

$\frac{3}{4}$

:

Question 12: Draw a number line from 0 to 1 divided into eighths. Mark

$\frac{5}{8}$

with an X.

Question 13: Which fraction is between

$\frac{1}{4}$

and

$$\frac{3}{4}$$

? Circle all that apply:

$$\frac{1}{8}, \frac{2}{4}, \frac{5}{8}, \frac{7}{8}$$

Answer: _____

Question 14: On a number line from 0 to 2, where would

$$1\frac{1}{2}$$

be located?

Answer: _____

Question 15: Place these fractions in order from left to right on a number line:

$$\frac{7}{8}, \frac{1}{8}, \frac{4}{8}$$

Answer: _____

Placement Penguin Says:

"You're a Number Line Navigator!"

Joke Time: What did the number line say to the fraction? You're right where you belong!

Section 3: Challenge - Comparing to the Whole

Question 16: Is $\frac{7}{8}$ closer to 0 or 1? Explain your reasoning.

Answer: _____

Question 17: Is $\frac{1}{5}$ closer to 0 or $\frac{1}{2}$?

Answer: _____

Question 18: Which fraction is closest to 1 whole?

$$\frac{5}{6}, \frac{9}{10}, \frac{7}{8}$$

Answer: _____

Question 19: Is $\frac{2}{3}$ closer to $\frac{1}{2}$ or to 1?

Answer: _____

Question 20: On a number line from 0 to 2, is $1\frac{3}{4}$

closer to 1 or 2?

Answer: _____

Question 21: Estimate: Which fraction is about halfway between 0 and 1?

$$\frac{1}{10}, \frac{5}{10}, \frac{9}{10}$$

Answer: _____

Question 22: A runner has completed

$$\frac{11}{12}$$

of a race. Are they closer to the start or the finish?

Answer: _____

Question 23: Between which two whole numbers does

$$2\frac{2}{3}$$

lie?

Answer: _____

Estimation Elephant Says:

"You're a Benchmarking Boss!"

Joke Time: Why did the fraction bring a map?
To find its way on the number line!

Excellent work! Check your answers on the next page.

WORKSHEET 20
ANSWER KEY

Section 1: Fluency - Identifying Positions

1. $\frac{4}{8}$ or $\frac{1}{2}$ (B is at the halfway point)

2. $\frac{2}{8}$ or $\frac{1}{4}$

3. $\frac{6}{8}$ or $\frac{3}{4}$

4. R (letter R is at $\frac{3}{4}$)

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

6. $\frac{1}{6}$

7. Seven tenths of the way from 0 to 1 (or 70% of the distance)

8. True

Section 2: Reasoning - Placing Fractions

9. Students should mark $\frac{1}{2}$

at the midpoint of the number line (6.5 cm mark)

10.

$\frac{1}{4}$

at 3.25 cm,

$\frac{1}{2}$

at 6.5 cm,

$\frac{3}{4}$

at 9.75 cm

11.

$\frac{3}{4}$

at 4.9 cm,

$1\frac{1}{4}$

at 8.1 cm,

$\frac{1}{2}$

at 3.25 cm from 0

12. Students should draw a number line with 8 equal divisions and mark X at the 5th tick (

$\frac{5}{8}$

)

13.

$\frac{2}{4}$

(which equals

$\frac{1}{2}$

) and

$\frac{5}{8}$

14. Exactly halfway between 1 and 2 (at 1.5 or the 9.75 cm mark on a 13 cm line)

15. From left to right:

$\frac{1}{8}, \frac{4}{8}, \frac{7}{8}$

Section 3: Challenge - Comparing to the Whole

16. Closer to 1. ($\frac{7}{8}$ is only $\frac{1}{8}$ away from 1, but $\frac{7}{8}$ away from 0)

17. Closer to 0. ($\frac{1}{5}$ is only 0.2 while $\frac{1}{2}$ is 0.5)

18. $\frac{9}{10}$ (it's only $\frac{1}{10}$ away from 1)

19. Closer to $\frac{1}{2}$. ($\frac{2}{3} \approx 0.67$, which is 0.17 from $\frac{1}{2}$ and 0.33 from 1)

20. Closer to 2. ($1\frac{3}{4}$ is $\frac{1}{4}$ from 2, but $\frac{3}{4}$

from 1)

21. $\frac{5}{10}$ (or $\frac{1}{2}$)

22. Closer to the finish. ($\frac{11}{12}$ is almost complete, only $\frac{1}{12}$ remaining)

23. Between 2 and 3

Fantastic Achievement!

You've mastered Comparing Fractions!
You're ready to tackle more fraction challenges!