IMPROPER FRACTIONS

TARGET To change an improper fraction to a mixed number and vice versa.

Examples

Change $\frac{20}{3}$ to a mixed number.

$\frac{20}{3} = 20 \div 3$

$= 6$ remainder 2

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

Change $3\frac{2}{5}$ to an improper fraction.

$3\frac{2}{5} = 3 + \frac{2}{5}$

$= \frac{15}{5} + \frac{2}{5}$

$= \frac{17}{5}$

A

Write the next five pairs of numbers in each number line.

1. 0, $\frac{1}{2}$, $\frac{2}{2}$, $\frac{3}{2}$, $\frac{4}{2}$, $\frac{5}{2}$ / 0, $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$
2. 0, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$, $\frac{4}{3}$, $\frac{5}{3}$ / 0, $\frac{1}{3}$, $\frac{2}{3}$, 1, $1\frac{1}{3}$, $1\frac{2}{3}$
3. 0, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$, $\frac{5}{4}$ / 0, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$
4. 0, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{5}{5}$ / 0, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$, 1

Use your number lines to write these improper fractions as mixed numbers.

5. $\frac{7}{2}$
6. $\frac{5}{3}$
7. $\frac{11}{4}$
8. $\frac{8}{5}$
9. $\frac{9}{2}$
10. $\frac{7}{3}$
11. $\frac{5}{4}$
12. $\frac{11}{5}$

Use your number lines to write these mixed numbers as improper fractions.

13. $2\frac{1}{2}$
14. $3\frac{1}{3}$
15. $1\frac{3}{4}$
16. $1\frac{4}{5}$
17. $5\frac{1}{2}$
18. $2\frac{2}{3}$
19. $2\frac{1}{4}$
20. $1\frac{1}{5}$

B

Copy and complete.

1. $\frac{7}{5} = 1\square$
2. $\frac{13}{4} = \square\frac{1}{4}$
3. $7\frac{1}{2} = \square$
4. $3\frac{2}{3} = \square$

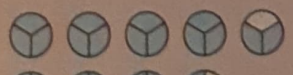
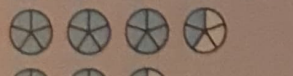
Change to mixed numbers.

5. $\frac{17}{2}$
6. $\frac{17}{6}$
7. $\frac{21}{4}$
8. $\frac{22}{9}$
9. $\frac{23}{5}$
10. $\frac{11}{8}$
11. $\frac{16}{3}$
12. $\frac{27}{10}$

Change to improper fractions.

13. $4\frac{3}{4}$
14. $2\frac{5}{7}$
15. $6\frac{2}{3}$
16. $4\frac{1}{6}$
17. $1\frac{2}{9}$
18. $2\frac{4}{5}$
19. $3\frac{3}{10}$
20. $2\frac{7}{8}$

Write as both mixed numbers and improper fractions.

21. 
22. 
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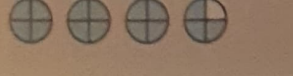
25. 

C

Change to mixed numbers.

1. $\frac{24}{5}$
2. $\frac{25}{3}$
3. $\frac{49}{10}$
4. $\frac{27}{8}$
5. $\frac{29}{4}$
6. $\frac{41}{7}$
7. $\frac{37}{6}$
8. $\frac{41}{9}$
9. $\frac{89}{20}$
10. $\frac{648}{100}$
11. $\frac{43}{12}$
12. $\frac{37}{16}$
13. $\frac{114}{25}$
14. $\frac{105}{40}$
15. $\frac{96}{15}$
16. $\frac{167}{50}$

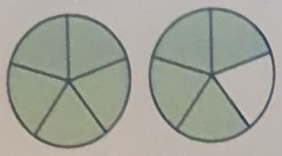
Change to improper fractions.

17. $6\frac{3}{4}$
18. $8\frac{1}{10}$
19. $3\frac{7}{9}$
20. $7\frac{3}{5}$
21. $5\frac{7}{8}$
22. $8\frac{5}{6}$
23. $9\frac{2}{3}$
24. $4\frac{4}{7}$
25. $9\frac{1}{11}$
26. $5\frac{6}{100}$
27. $3\frac{18}{30}$
28. $3\frac{7}{18}$
29. $2\frac{7}{24}$
30. $5\frac{39}{50}$
31. $4\frac{2}{13}$
32. $5\frac{5}{21}$

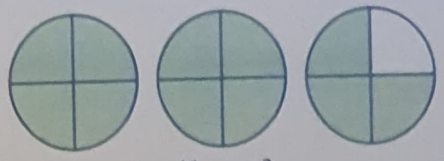
MIXED NUMBERS

TARGET To recognise an improper fraction and write as a mixed number.

Examples



$\frac{9}{5} = 1\frac{4}{5}$



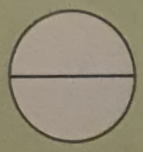
$\frac{11}{4} = 2\frac{3}{4}$

21 tenths $= 2\frac{1}{10}$

$\frac{21}{10} = 2\frac{1}{10}$

A

Use the diagram to help complete the fraction.

1. $1 = \frac{\square}{5}$ 
2. $1 = \frac{\square}{\square}$ 
3. $1 = \frac{\square}{\square}$ 
4. $1 = \frac{\square}{\square}$ 

Copy and complete.

5. $1 = \square$ thirds
6. $1 = \square$ eighths
7. $1 = \square$ quarters
8. $1 = \square$ ninths

Write the next four terms in each sequence using mixed numbers.

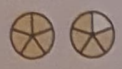
9. $0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, 1, 1\frac{1}{4}$
10. $0, \frac{1}{2}, 1, 1\frac{1}{2}, 2, 2\frac{1}{2}$
11. $0, \frac{1}{3}, \frac{2}{3}, 1, 1\frac{1}{3}, 1\frac{2}{3}$
12. $0, \frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \frac{4}{8}, \frac{5}{8}$

B

Write the shaded area as:

a) an improper fraction

b) a mixed number.

1. 
2. 
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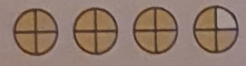
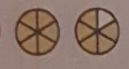
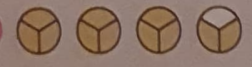
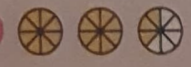
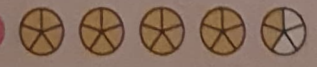
4. 
5. 
6. 
7. 
8. 

Write as an improper fraction and complete the mixed number.

9. 7 quarters $= 1\square$
10. 5 halves $= \square\frac{1}{2}$
11. 17 tenths $= 1\square$
12. 8 fifths $= \square\frac{3}{5}$
13. 7 thirds $= \square$
14. 15 eighths $= \square$
15. 10 sixths $= \square$
16. 9 quarters $= \square$

C

Change to mixed numbers.

1. $\frac{7}{2}$
2. $\frac{21}{5}$
3. $\frac{29}{10}$
4. $\frac{13}{8}$
5. $\frac{29}{4}$
6. $\frac{55}{6}$
7. $\frac{346}{100}$
8. $\frac{53}{12}$

Copy and complete.

9. $3\frac{3}{4} = \square$ quarters
10. $5\frac{7}{10} = \square$ tenths
11. $6\frac{3}{5} = \square$ fifths
12. $2\frac{19}{100} = \square$ hundredths
13. $4\frac{5}{6} = \square$ sixths
14. $3\frac{4}{9} = \square$ ninths
15. $7\frac{3}{8} = \square$ eighths
16. $6\frac{4}{7} = \square$ sevenths

Write the next four terms in each sequence using mixed numbers.

17. $\frac{1}{7}, \frac{3}{7}, \frac{5}{7}, 1$
18. $\frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}$
19. $\frac{1}{10}, \frac{3}{10}, \frac{5}{10}, \frac{7}{10}$
20. $\frac{1}{9}, \frac{3}{9}, \frac{5}{9}, \frac{7}{9}$