

25.02.21

LO: I can convert between mixed and improper fractions.

1. Jack uses bar models to convert a mixed number into an improper fraction.



$$2\frac{3}{5} = 2 \text{ wholes} + 3 \text{ fifths}$$

$$2 \text{ wholes} = 10 \text{ fifths}$$
$$10 \text{ fifths} + 3 \text{ fifths} = 13 \text{ fifths}$$

Use Jack's method to convert $2\frac{1}{6}$, $4\frac{1}{6}$, $4\frac{1}{3}$ and $8\frac{2}{3}$

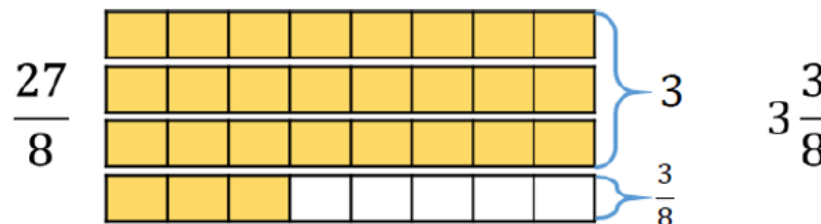
$$2\frac{1}{6} = \frac{13}{6}$$

$$4\frac{1}{6} = \frac{25}{6}$$

$$4\frac{1}{3} = \frac{13}{3}$$

$$8\frac{2}{3} = \frac{26}{3}$$

2. Tommy converts the improper fraction $\frac{27}{8}$ into a mixed number using bar models.



Use Tommy's method to convert $\frac{25}{8}$, $\frac{27}{6}$, $\frac{18}{7}$ and $\frac{32}{4}$

$$\frac{25}{8} = 3\frac{1}{8}$$

$$\frac{27}{6} = 4\frac{3}{6}$$

$$\frac{18}{7} = 2\frac{4}{7}$$

$$\frac{32}{4} = 8$$

3. Convert the improper fractions to mixed numbers.

a) $\frac{10}{2} = 5$

e) $\frac{12}{5} = 2\frac{2}{5}$

b) $\frac{10}{3} = 3\frac{1}{3}$

f) $\frac{13}{6} = 2\frac{1}{6}$

c) $\frac{10}{4} = 2\frac{2}{4}$

g) $\frac{13}{7} = 1\frac{6}{7}$

d) $\frac{10}{5} = 2$

h) $\frac{31}{8} = 3\frac{7}{8}$

4.

$\text{circle} \frac{3}{5} = \frac{\text{triangle}}{5}$

The table shows some possible values of the circle.

Use this to find the corresponding value of the triangle.

●	▲
1	8
2	13
4	23
8	43
16	83
17	88
160	803

5. Find two possible values for ★ and ▲

$\frac{30}{\star} = \frac{\blacktriangle}{\star}$

★ = 7

▲ = 4

★ = 14

▲ = 2

6.

Fill in the missing numbers.

How many different possibilities can you find for each equation?

$2\frac{\square}{8} = \frac{\square}{8}$

$2\frac{\square}{5} = \frac{\square}{5}$

$2\frac{1}{8} = \frac{17}{8}$ $2\frac{2}{8} = \frac{18}{8}$

$2\frac{3}{8} = \frac{19}{8}$ $2\frac{4}{8} = \frac{20}{8}$

$2\frac{5}{8} = \frac{21}{8}$ $2\frac{6}{8} = \frac{22}{8}$

$2\frac{7}{8} = \frac{23}{8}$

Compare the number of possibilities you found.

$2\frac{1}{5} = \frac{11}{5}$

$2\frac{3}{5} = \frac{13}{5}$

$2\frac{2}{5} = \frac{12}{5}$

$2\frac{4}{5} = \frac{14}{5}$

Did you notice the number of possibilities is one less than the denominator? Why is that?

7. Spot the mistake

- $\frac{27}{5} = 5\frac{1}{5}$
- $\frac{27}{3} = 8$
- $\frac{27}{4} = 5\frac{7}{4}$
- $\frac{27}{10} = 20\frac{7}{10}$

What mistakes have been made?

Can you find the correct answers?

Correct answers

- $5\frac{2}{5}$ (incorrect number of fifths)
- 9 (incorrect whole)
- $6\frac{3}{4}$ (still have an improper fraction)
- $2\frac{7}{10}$ (incorrect number of wholes)