

## Fractions: Of Amounts & Multiplying

# Starter (1 of 3)

20



$\frac{1}{2}$  of 20 = ?



$\frac{1}{4}$  of 20 = ?



$\frac{3}{4}$  of 20 = ?

1. Fully **uproszcz** **simplify**:  $\frac{18}{24}$

2. Calculate:  $2\frac{1}{3} + 1\frac{1}{2}$

3. Using the **modele słupkowe** **bar models** to the left:

$\frac{1}{2}$  of 20 = \_\_\_\_

$\frac{1}{4}$  of 20 = \_\_\_\_

$\frac{3}{4}$  of 20 = \_\_\_\_

# Starter (1 of 3)

20



$\frac{1}{2}$  of 20 = 10



$\frac{1}{4}$  of 20 = 5



$\frac{3}{4}$  of 20 = 15

1. Fully **uproszcz** **simplify**:  $\frac{18}{24} \frac{3}{4}$

2. Calculate:  $2\frac{1}{3} + 1\frac{1}{2} = 3\frac{5}{6}$

3. Using the **modele słupkowe** **bar models** to the left:

$\frac{1}{2}$  of 20 = 10

$\frac{1}{4}$  of 20 = 5

$\frac{3}{4}$  of 20 = 15

## Starter (2 of 3)

4. Calculate:

$$\frac{1}{3} \text{ of } 24 \qquad \frac{2}{3} \text{ of } 24$$

5. Fill in the blank:  $\frac{3}{4}$  of  $\underline{\quad} = 18$

6. Find  $\frac{2}{5}$  of 35.

## Starter (2 of 3)

4. Calculate:

$$\frac{1}{3} \text{ of } 24 \qquad \frac{2}{3} \text{ of } 24$$

8 and 16

5. Fill in the blank:  $\frac{3}{4}$  of 24 = 18

6. Find  $\frac{2}{5}$  of 35. 14

## Starter (3 of 3)

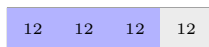
7. Amy cuts a 60 cm ribbon and takes  $\frac{3}{4}$  of it. How long is her piece?
8. True or false? " $\frac{1}{2}$  of  $30 = 30 \div 2$ ." Explain your reasoning.

## Starter (3 of 3)

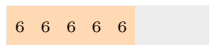
7. Amy cuts a 60 cm ribbon and takes  $\frac{3}{4}$  of it. How long is her piece? 45 cm
8. True or false? " $\frac{1}{2}$  of 30 =  $30 \div 2$ ." Explain your reasoning. True.  $\frac{1}{2}$  of 30 = 15 and  $30 \div 2 = 15$ .

# Starter (1 of 3)

48



$\frac{3}{4}$  of 48 = ?



$\frac{5}{8}$  of 48 = ?

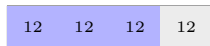
1. Order smallest to largest:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{12}$

2. Convert  $\frac{17}{5}$  to a **mixed number** *liczba mieszana*.

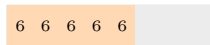
3. Use the **bar model** *model słupkowy* to find  $\frac{3}{4}$  of 48 and  $\frac{5}{8}$  of 48.

# Starter (1 of 3)

48



$\frac{3}{4}$  of 48 = 36



$\frac{5}{6}$  of 48 = 40

1. Order smallest to largest:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{12}$   $\frac{3}{8} < \frac{5}{12} < \frac{1}{2}$

2. Convert  $\frac{17}{5}$  to a **mixed number**  $3\frac{2}{5}$

3. Use the **bar model** to find  $\frac{3}{4}$  of 48 and  $\frac{5}{8}$  of 48.

36 and 30

## Starter (2 of 3)

4. Calculate:  $\frac{5}{8}$  of 72
5.  $\frac{2}{3}$  of a class of 30 are girls. How many boys are there?
6. Rania says " $\frac{3}{5}$  of 40 = 24". Is she correct? Show your working.

## Starter (2 of 3)

4. Calculate:  $\frac{5}{8}$  of 72 = 45
5.  $\frac{2}{3}$  of a class of 30 are girls. How many boys are there? 10 boys
6. Rania says " $\frac{3}{5}$  of 40 = 24". Is she correct? Show your working. Yes;  
 $\frac{3}{5} \times 40 = 24.$

## Starter (3 of 3)

7. Which is greater:

$\frac{3}{4}$  of 60 or  $\frac{4}{5}$  of 55?

8. Fill in the blank:

$$\frac{\quad}{8} \text{ of } 64 = 40$$

## Starter (3 of 3)

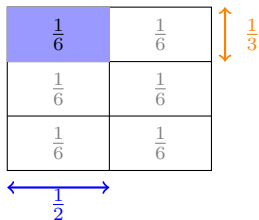
7. Which is greater:

$\frac{3}{4}$  of 60 or  $\frac{4}{5}$  of 55?  $\frac{3}{4}$  of 60 (= 45)

8. Fill in the blank:

$\frac{5}{8}$  of 64 = 40

# Starter (1 of 3)



1. What is  $\frac{1}{2}$  of  $\frac{1}{3}$ ? Draw a picture to show your answer.

model pola

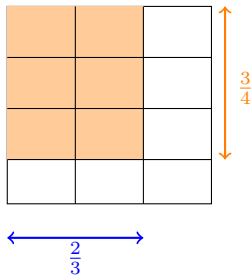
2. Use the **area model** on the left to calculate

$$\frac{1}{2} \times \frac{1}{3} = \frac{\quad}{\quad}$$

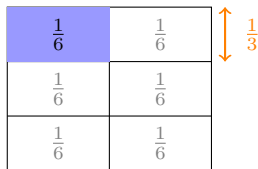
model pola

3. Use the second **area model** to calculate and **uproszcz**

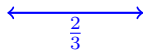
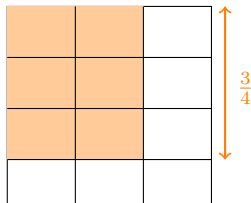
**simplify** :  $\frac{2}{3} \times \frac{3}{4} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$



# Starter (1 of 3)



Q1:  $\frac{1}{2}$  of  $\frac{1}{2} = \frac{1}{4}$



1. What is  $\frac{1}{2}$  of  $\frac{1}{2}$ ? Draw a picture to show your answer.

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

model pola

2. Use the **area model** on the left to calculate

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

model pola

3. Use the second **area model** to calculate and **uproszcz**

**simplify** :  $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$

## Starter (2 of 3)

4. Calculate:

$$\frac{3}{5} \times \frac{5}{7}$$

5. Uprość *then* mnóż  
Simplify *then* multiply:

$$\frac{3}{9} \times \frac{4}{8}$$

## Starter (2 of 3)

4. Calculate:

$$\frac{3}{5} \times \frac{5}{7}$$

$$= \frac{3}{7}$$

5. Uprość *then* mnóż  
Simplify *then* multiply:

$$\frac{3}{9} \times \frac{4}{8} = \frac{1}{6}$$

## Starter (3 of 3)

6. Find  $\frac{3}{4}$  of  $\frac{2}{5}$ . What do you notice about “of” and “ $\times$ ”?

7. Calculate:  $1\frac{1}{2} \times \frac{1}{3}$

(Hint: convert to improper first.)

## Starter (3 of 3)

6. Find  $\frac{3}{4}$  of  $\frac{2}{5}$ . What do you notice about “of” and “ $\times$ ”?  $\frac{3}{10}$ ; “of” means mnożyć multiply.

7. Calculate:  $1\frac{1}{2} \times \frac{1}{3}$

(Hint: convert to improper first.)  $= \frac{1}{2}$

## Starter (1 of 3)

1. Uprość  
Simplify:  $\frac{24}{36}$

2.  $3\frac{1}{4} - 1\frac{2}{3}$

3.  $\frac{5}{6}$  of 42

## Starter (1 of 3)

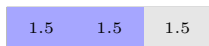
1. Uprość  
Simplify:  $\frac{24}{36} \frac{2}{3}$

2.  $3\frac{1}{4} - 1\frac{2}{3} = 1\frac{7}{12}$

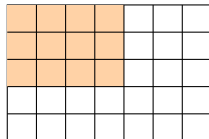
3.  $\frac{5}{6}$  of 42 = 35

## Starter (2 of 3)

$4\frac{1}{2}$  m wall



$$\frac{3}{5} \times \frac{4}{7}$$



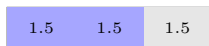
4. A wall is  $4\frac{1}{2}$  m long. A mural covers  $\frac{2}{3}$  of it. Use the **model słupkowy** **bar model** to find the length of the mural.

**model pola**

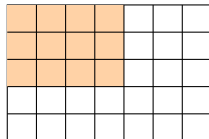
5. Use the **area model** to calculate:  $\frac{3}{5} \times \frac{4}{7} = \frac{\quad}{\quad}$
6. Which is greater:  $\frac{2}{3} \times \frac{3}{4}$ , or  $\frac{3}{4}$  of  $\frac{2}{3}$ ? Explain.

## Starter (2 of 3)

$4\frac{1}{2}$  m wall



$$\frac{3}{5} \times \frac{4}{7}$$



4. A wall is  $4\frac{1}{2}$  m long. A mural covers  $\frac{2}{3}$  of it. Use the **model słupkowy** **bar model** to find the length of the mural. **3 m**
- model pola**

5. Use the **area model** to calculate:  $\frac{3}{5} \times \frac{4}{7} = \frac{12}{35}$

6. Which is greater:  $\frac{2}{3} \times \frac{3}{4}$ , or  $\frac{3}{4}$  of  $\frac{2}{3}$ ? Explain. **They are equal ( $\frac{1}{2}$ ).**

## Starter (3 of 3)

7. Fill in the blank:

$$\frac{3}{5} \times \underline{\quad} = \frac{6}{35}$$

ułamki właściwe

proper fractions always gives a  
ułamek

smaller result than either fraction."

kontrprzykład

Explain or give a counterexample.

Mnożenie

8. True or false? "Multiplying two

# Starter (3 of 3)

7. Fill in the blank:

$$\frac{3}{5} \times \frac{2}{7} = \frac{6}{35}$$

Mnożenie

8. True or false? “**Multiplying** two

ułamki właściwe

proper fractions always gives a  
ułamek

smaller result than either fraction.”  
kontrprzykład

Explain or give a counterexample.

True; e.g.  $\frac{2}{3} \times \frac{3}{4} = \frac{1}{2}$ , which is

smaller than both.

# Starter (1 of 3)

1. Uprość  
Simplify:  $\frac{20}{30}$

2. Uprość  
Simplify:  $\frac{84}{108}$

3. Convert  $4\frac{3}{5}$  to an  $\frac{\text{ułamek niewłaściwy}}{\text{improper fraction}}$ .

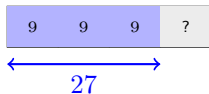
# Starter (1 of 3)

1. Uprość  
Simplify:  $\frac{20}{30} \frac{2}{3}$

2. Uprość  
Simplify:  $\frac{84}{108} \frac{7}{9}$

3. Convert  $4\frac{3}{5}$  to an  $\frac{\text{ułamek niewłaściwy}}{\text{improper fraction}}$  .  $\frac{23}{5}$

## Starter (2 of 3)

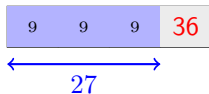


4. Calculate:  $2\frac{3}{4} + 1\frac{3}{5}$

5.  $\frac{3}{4}$  of a number is 27. Use the **model słupkowy** **bar model** to find the whole number.

6. Jack spends  $\frac{1}{3}$  of his pocket money on Monday and  $\frac{1}{4}$  on Tuesday. What **ułamek** **fraction** remains?

## Starter (2 of 3)



4. Calculate:  $2\frac{3}{4} + 1\frac{3}{5} = 4\frac{7}{20}$

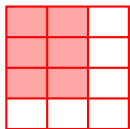
5.  $\frac{3}{4}$  of a number is 27. Use the **model słupkowy** **bar model** to find the whole number. **36**

6. Jack spends  $\frac{1}{3}$  of his pocket money on Monday and  $\frac{1}{4}$  on Tuesday. What **ułamek** **fraction** remains?  $\frac{5}{12}$

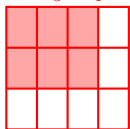
## Starter (3 of 3)

7. A jug holds  $1\frac{1}{2}$  litres. You fill  $\frac{2}{3}$  of it. How many millilitres is that?
8. Show that  $\frac{2}{3} \times \frac{3}{4} = \frac{3}{4} \times \frac{2}{3}$  using area diagrams.

## Starter (3 of 3)



Q8:  $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12}$



$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

7. A jug holds  $1\frac{1}{2}$  litres. You fill  $\frac{2}{3}$  of it. How many millilitres is that? **1000 mL**
8. Show that  $\frac{2}{3} \times \frac{3}{4} = \frac{3}{4} \times \frac{2}{3}$  using area diagrams.