

MATH 5 CLASSWORK 21

April 11, 2021

Proportions

Proportion is an equivalent fraction:

$$\frac{3}{2} = \frac{6}{x} \quad x = \frac{6}{3} \cdot 2$$

Property of Proportion:


$$\frac{a}{b} = \frac{c}{d} \longrightarrow a \cdot d = b \cdot c$$

$$\frac{a}{b} = \frac{c}{d} \longrightarrow \frac{a}{c} = \frac{b}{d}$$

1. To make 13 cookies you need 2 cups of flour. How much flour you need to make 20 cookies?

13 cookies – 2 cups

20cookies – x cups

$$\frac{13}{20} = \frac{2}{x}$$

$$13x = 2 \cdot 20$$

2. A metal bar ten meters long weighs 128 kg. What is the weight of a similar bar that is two meters four cm long? (133.12kg)
3. If twelve inches correspond to 30.48 centimeters, how many centimeters are there in thirty inches? (76.2cm)

HOMEWORK 21

April 11, 2021

1. Write each of the following expressions in the form $2^n 5^k$:

(a) $\frac{2^2 5^8}{2^5 5^3} =$

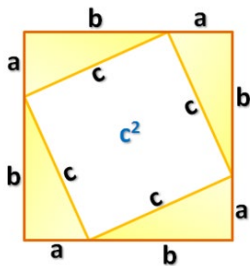
(b) $(2^3)^2 10^2 5^{-3} =$

(c) $\frac{2^8 5^{-14}}{10^{-3}} =$

2. Calculate:

$$\frac{1}{\left(0.\bar{3} + \frac{1}{6}\right) \cdot \frac{2}{3}} =$$

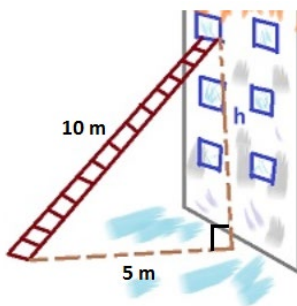
3. A piece of cable 8.5 cm long weighs 52 grams. What will a 10-cm length of the same cable weigh? *[Use proportion]*
4. Typically, 250 g of orange juice contain around 24 g of sugar. (Check the label if you don't believe me). What is percentage of sugar by mass in this solution? *[Use proportion]*
5. To make 13 cookies you need 2 cups of flour. How much flour you need to make 30 cookies? *[Use proportion]*
6. Mary can read 22 pages in 30 minutes. How long would it take her to read a 100-page book? Write your answer in hours and minutes and round to the nearest minute, if needed. *[Use proportion]*
- 7.



Prove Pythagorean theorem by expressing the area of the square as

1. side x side
2. Sum of 4 right angle triangles and a square

- 8.



Find the distance from the window to the ground h .