

MATH 5 CLASSWORK 21

April 4, 2020

Proportions

Proportion is an equivalent fraction:

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

Property of Proportion:


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

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

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)

HOMWORK 21

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

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

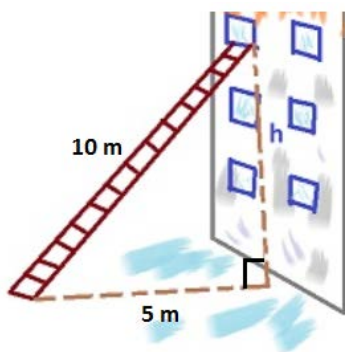
(b) $(2^3)^2 10^2 5^{-3} =$

(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.



Find the distance from the window to the ground h . *[Use Pythagorean Theorem]*