

Lesson 23

Homework

1 In your notebook, solve the equations and check the answer. Copy your answers here.

$$(350 - x) + 250 = 315$$

$$x = \underline{285}$$

$$x - (400 - 67) - 100 = 170$$

$$x = \underline{603}$$

$$x + (456 - 123) = 895$$

$$x = \underline{562}$$

2 Open up the parentheses:

$$78 + (56 - 4) + c = \underline{130 + c}$$

$$a - (b - f) - (k - m) = \underline{a - b + f - k + m}$$

$$(a - b + c) + (s - n) = \underline{a - b + c + s - n}$$

$$(z - p) - (k + h) = \underline{z - p - k - h}$$

$$(k - 81) - (d + 1) = \underline{k - 82 - d}$$

$$(3 + e - j) + (f - 80 - d) = \underline{e - j - 77 + f - d}$$

3 Find any errors and correct them:

$$n \times 4 = \underline{n + n + n + n}$$

$$735 \overset{\leftarrow}{\neq} 753$$

$$16 \times 3 = 48$$

$$b - 61 \overset{\succ}{\neq} b - 610$$

$$5 \times 3 \overset{\succ}{\neq} 5 + 5$$

$$62 \times 4 \overset{\leftarrow}{\neq} 624$$

$$p + 28 \overset{\leftarrow}{\neq} p + (28 + 1)$$

$$x - 22 \overset{\succ}{\neq} x - (22 + 1)$$

$$y \times 3 = \underline{y + y + y}$$

4 In the numbers below, some of the digits accidentally got erased. These digits are indicated with the wild-card symbol *. Where possible, **compare** the numbers using $>$, $<$, or $=$. **Cross out** the pairs which are impossible to compare.

$$9 \square * 1$$

$$**3 \square 8$$

$$**8 \square **6$$

$$2* \square *7$$

$$59 \square 1**$$

$$295 \square 2*4$$

$$4* \square 46$$

$$3** \square 5**$$

$$75* \square 74*$$

5 Fill in missing numbers:

$$\underline{8} \times 4 = 32$$

$$\underline{9} \times 7 = 42$$

$$\underline{9} \times 1 = 9$$

$$\underline{4} \times 9 = 36$$

$$\underline{9} \times 2 = 18$$

$$\underline{6} \times 3 = 18$$

$$\underline{9} \times 3 = 27$$

$$\underline{7} \times 8 = 56$$

$$\underline{9} \times 4 = 36$$

$$\underline{3} \times 8 = 24$$

$$5 \times \underline{8} = 40$$

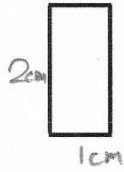
$$6 \times \underline{9} = 54$$

$$10 \times \underline{9} = 90$$

$$9 \times \underline{3} = 18$$

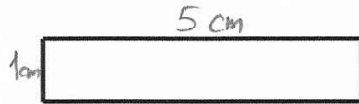
$$3 \times \underline{8} = 24$$

- 6 Measure the rectangles and find their areas (A) in square centimeters and their perimeters (P) in centimeters.



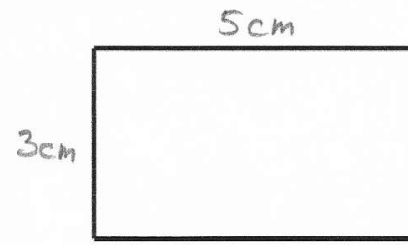
A = 2 cm²

P = 6 cm



A = 5 cm²

P = 12 cm



A = 15 cm²

P = 16 cm

- 7 Find the answer for each problem below. Then rewrite each problem using the commutative property and find the answer.

Example: $2 \times 3 = 6$ $3 \times 2 = 6$

$4 \times 6 =$ 24 $6 \times 4 =$ 24

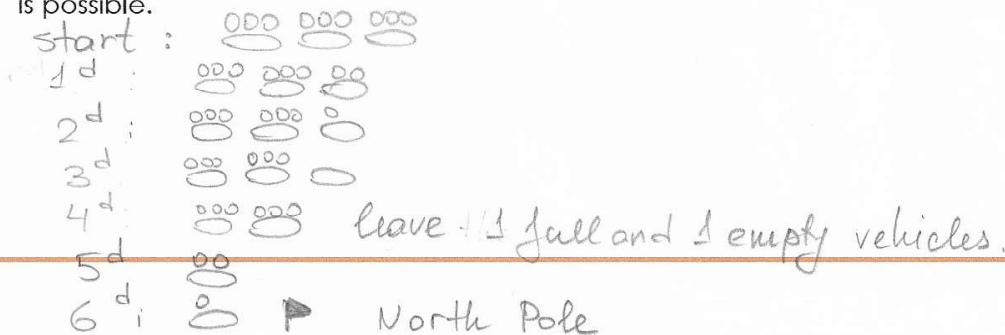
$7 \times 5 =$ 35 $5 \times 7 =$ 35

$9 \times 8 =$ 72 $8 \times 9 =$ 72

$0 \times 11 =$ 0 $11 \times 0 =$ 0

$12 \times 3 =$ 36 $3 \times 12 =$ 36

- 8 An expedition aims to reach the North Pole from a scientific station in 6 days. The expedition has 3 identical vehicles whose gas tank has enough fuel for 1 day of travel. Additionally, each vehicle can carry up to 3 canisters of fuel, each sufficient for 1 day of travel. The members of the expedition decided to start with 3 vehicles, reach the Pole with only one vehicle, and return all 3 vehicles to the station at the end. Explain how this is possible.



going back
pick up and
pull empty
vehicles.

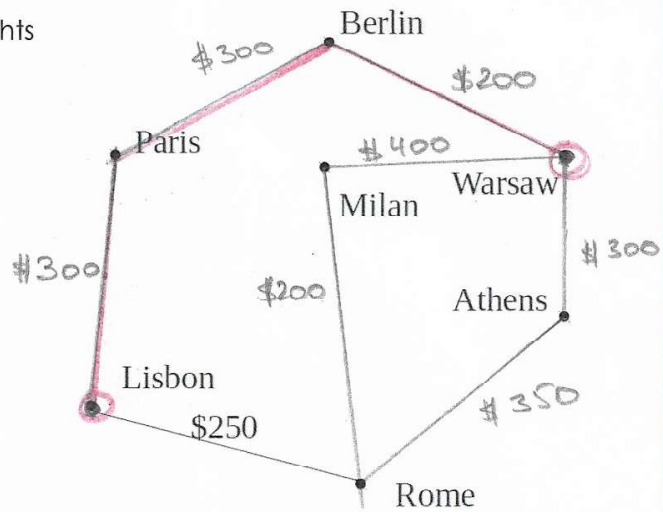
9 Four giraffes and six zebras live together happily in a large enclosure at the Bronx Zoo. They spend their time grazing in a sunny paddock surrounded by shady trees until one day, a mysterious stranger shows them the cartoon *Madagascar*. That same night, five of the animals escape from the enclosure and flee to Africa. Has at least one zebra abandoned its home?



yes

10 An air carrier has the following flights available in both directions:

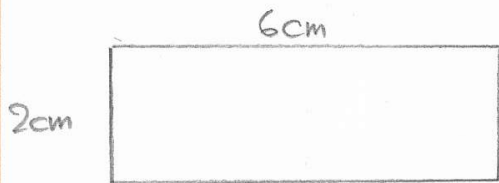
- Rome – Athens (\$350),
- Milan – Rome (\$200),
- Paris – Berlin (\$300),
- Paris – Lisbon (\$300),
- Warsaw – Athens (\$300),
- Lisbon – Rome (\$250),
- Berlin – Warsaw (\$200),
- Warsaw – Milan (\$400).



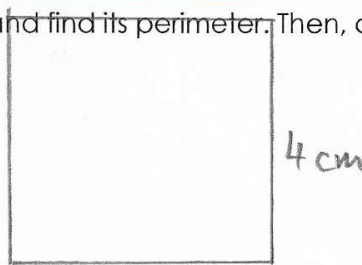
Complete the graph to find the cheapest route from Lisbon to Warsaw and trace it with red.

$L \rightarrow W$
 $L \rightarrow P \rightarrow B \rightarrow W = \800
 $L \rightarrow R \rightarrow A \rightarrow W = \900
 $L \rightarrow R \rightarrow M \rightarrow W = \850

11 Construct a rectangle 2 cm by 6 cm and find its perimeter. Then, construct a square with the same perimeter.

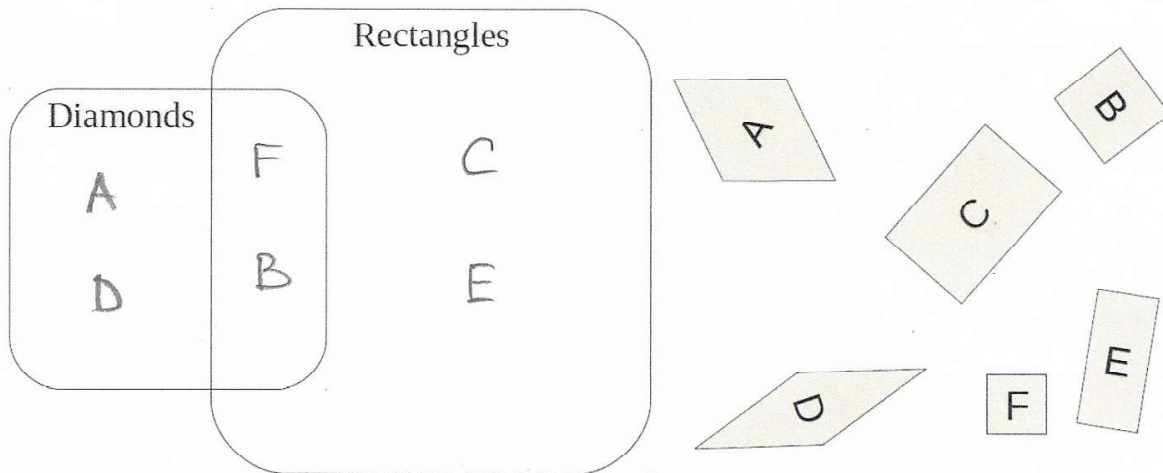


$P = 16 \text{ cm}$



$P = 16 \text{ cm}$

12 Write the letters of the polygons in the Venn diagram:



What is the intersection of the sets diamonds and rectangles called? square

13 A brother and his sister are 20 years old altogether. The brother is 2 years older than his sister.

How old is the brother? 12 years

How old is the sister? 8 years

$$10 + 10 = 20$$

$$9 + 11 = 20$$

$$8 + 12 = 20$$

14 Write all possible three-digit numbers using

a) the digits **5, 2, 9**

b) the digits **4, 8, 0**

if the digits cannot repeat in each number.

a) 529 592
259 295
952 925

b) 480 408
804 840
048 084

15 Imagine the beetle is sitting on the outside of each polyhedron; color that side in green. Draw the path of the beetle on each polyhedron if he walks around all the sides. (He did not walk on any of the tops or bottoms.) Remember, to use solid lines for the parts of the path that you can see and dashed lines for parts of the path that you cannot see.

