Math 3 Classwork 16

Warm Up

1

a) Insert brackets to the following number sentences to make the equality correct.

$$5 \times 154 + 46 = 1000$$

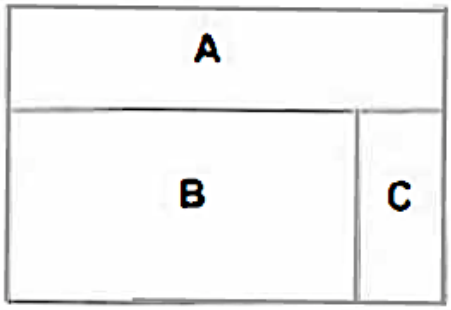
b) Compare:

28 + b ___ 28 + (b + 1)
32 + 1 ___ 32 + (1 + 2)
43 – (c + 4) ____ 43 – c

28+ b ___ 28 + (b – 1)
32 – x___ 32 – (x – 2)
58 – (p – 6) ___ 58 – p

2

How many rectangles are there in the picture? List them all: _____



3

Rank the children of the age line:

•Angie is older than Arthur
•Bob is younger than Katie
•Carl is the oldest
•Artur is older than Katie

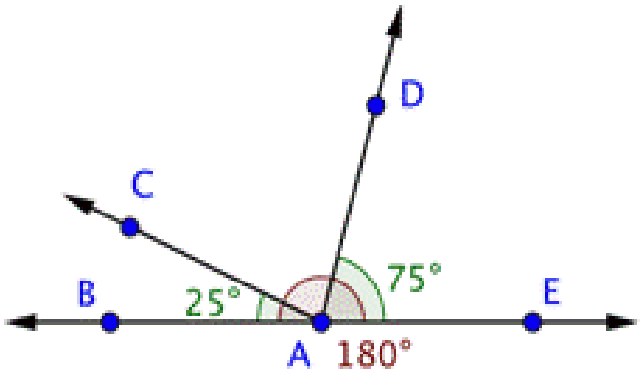
Young ——————————— *Old*

Homework Review

4

Below is a drawing of a straight angle ∠BAE (remember that a straight angle is always 180°) . The angle ∠DAE equals 75° and the angle ∠BAC = 25°.

a) Find an angle ∠*CAD* = _____
b) Find an angle ∠*BAD* = _____
a) Find an angle ∠*CAE* = _____



5

Calculate:

6 × 6 ÷ 6 = 7 ÷ 1 × 7 = 30 ÷ 30 × 30 =

New Material I

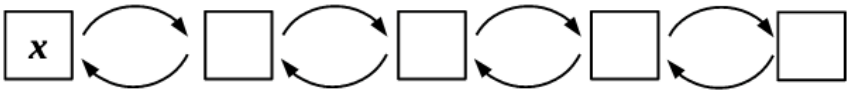
Multiplication and division are **inverse operations**.

It means that if we take a number and multiply it by another number and then divide the result by the same number, we will end up with our initial number.

$11 \times 2 \div 2 = 11$ $34 \times 9 \div 9 = 34$ $52 \div 26 \times 26 = 52$

6 Analyze the operations and undo them to solve the equation:

x	×	5	:	3	:	2	=	5
x	=							
x	=							



How to solve equations with division.

To solve for x the following equation: $5x = 25$, we have to "undo" multiplying by 5. So, we have to divide BOTH part of equation (this is an equation, remember?) by 5.

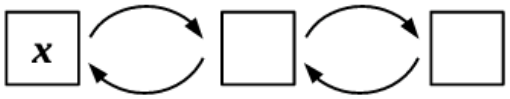
$5x \div 5 = 25 \div 5$ and we get $x = 5$

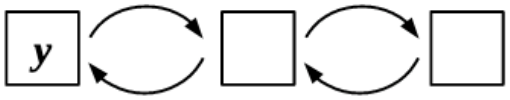
Let's check our work (always do it!): $5 \times x = 25$, using the solution we found, we write:

$5 \times 5 = 25$ or $25 = 25$! Our solution is correct.

7 Solve the equations (use drawings):

x	×	7	–	2	2	=	4	1	
x	×	7	=	4	1	+			
x	×	7	=						
x	=								
x	=								
									✔



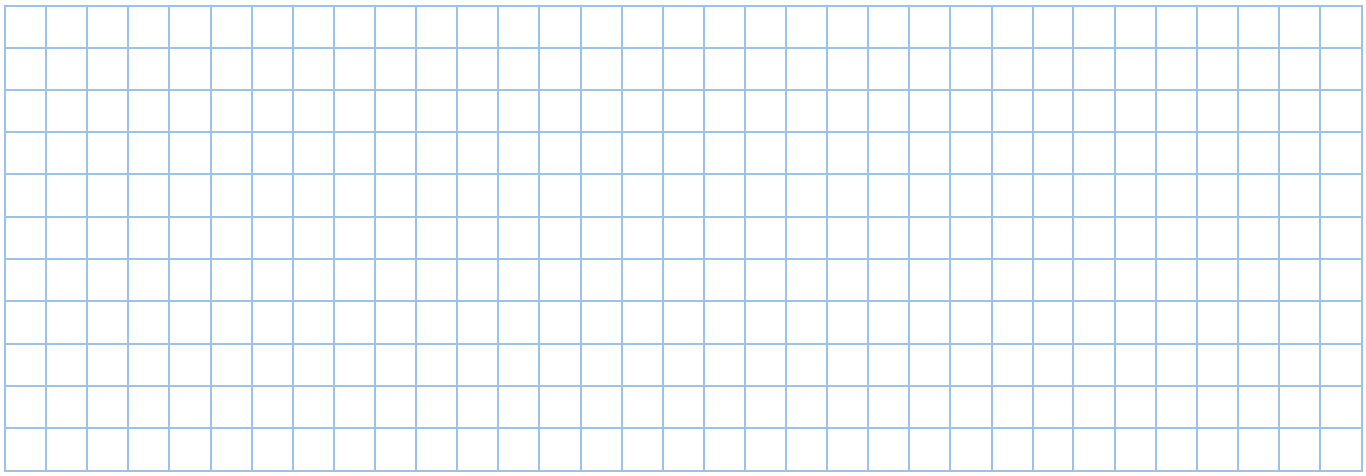


y	:	4	+	2	1	=	2	7	
									✔

8

Solve for x and check your answer:

a) $8 \div x = 4$ b) x ÷ 20 = 2 c) x × 12 = 48



9

Children were making bracelets. To make 4 bracelets, they need 80 beads, the same number for each bracelet. How many beads do they need to make 5 bracelets?

_____

_____

10

a) Julia and Victoria had 24 candies and they decided to equally divide all candies between two of them. How many candies did each girl get? _____

b) Then Jonathan came and asked girls to share their candies with him as well. Girls decided to share all 24 candies equally between 3 of them. Is it possible? How many candies will each child get? _____

c) Then Eli joined them and asked to give him some candies as well. Girls were very kind and decided to share all 24 candies equally between 4 of them. Is it possible? How many candies will each child get? _____

d) And then Steven and Milan came and … asked for candies! Now girls have to share their 24 candies with 6 children. Is it possible? How many candies will each child get?

_____

11

Mark the order of operations and calculate:

1 2

24 : 6 × 2 = ____ 8 × 3 + 5 × 4 = ____ 43 + 20 – 5 = _____

18 + 3 : 3 = ____ (18 + 3) : 3 = ____ 36 : (13 – 4) = ____

REVIEW I

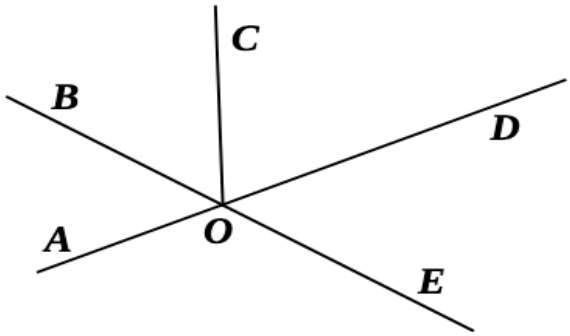
12 Calculate using correct units:

1 kg × 4 = _____ 1 m × 7 = _____ 1 egg × 4 = _____

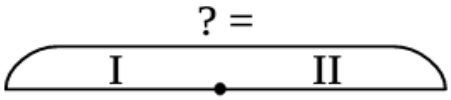
3 *l* × 3 = _____ 1 sec × 6 = _____ 10 mg × 3 = _____

13 Find all pairs of supplementary angles on the drawing. Measure these angles with a protractor. Write down your results. Make sure supplementary angles add up to 180º.

If ∠AOB = 50º then ∠BOD=_____



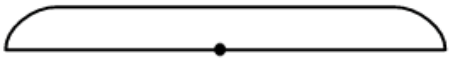
14 Choose the correct sketch for each problem, use them and write the expressions:



a) There are 5 eggs in a basket. There are b eggs in another basket. How many eggs are in both baskets?

_____

b) There are 5 eggs in each of b baskets. How many eggs are in all these baskets?



_____

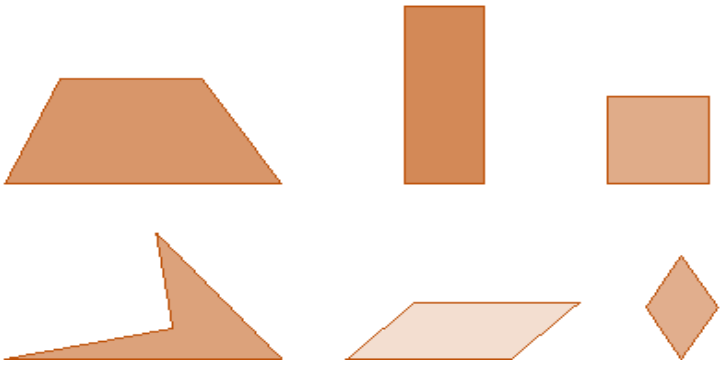
REVIEW II

Quadrilateral

A Quadrilateral has four-sides, it is **2-dimensional** (a flat shape), **closed** (the lines join up), and has **straight** sides.

A quadrilateral that has 2 parallel sides is called trapezoid.
What is the difference between the trapezoid II and the quadrilaterals III, IV, V, and VI? How many parallel sides do these quadrilaterals have?
A quadrilateral that is formed by 2 pairs of the parallel sides is called a parallelogram.
Examine the picture below. What is the difference between the quadrilateral IV and the parallelogram III? How are the sides related to each other?
A parallelogram with 4 equal sides is called rhombus.
Is there a parallelogram that has only 3 equal sides? Why, or why not?
Examine the picture below. What is the difference between the quadrilaterals V and VI and the other quadrilaterals on the picture? What kind of angles do they have?

Quadrilateral
A four-sided polygon.

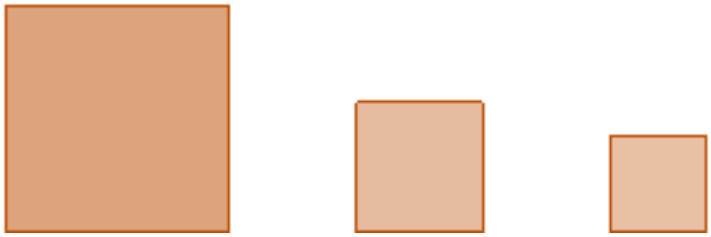


The sum of the angles of a quadrilateral is 360° $degrees$.

Rectangle
A four-sided polygon with all right angles

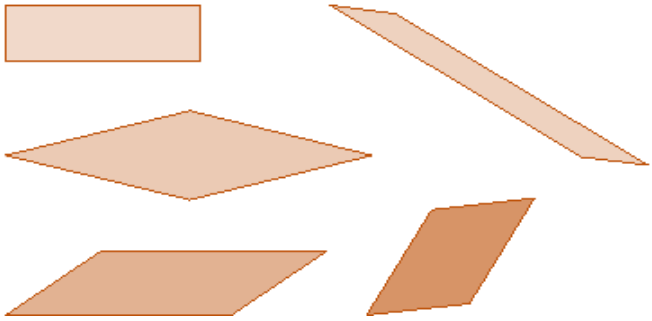
The sum of the angles of a rectangle is 360° $degrees$

Square
A four-sided polygon with equal-length sides meeting at right angles.

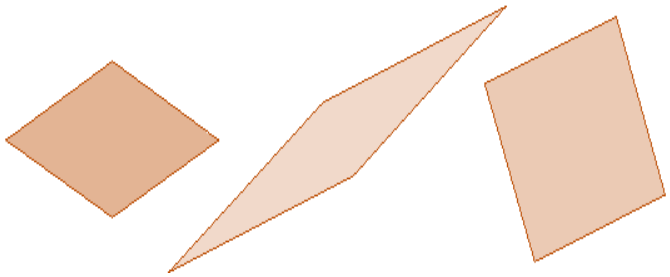
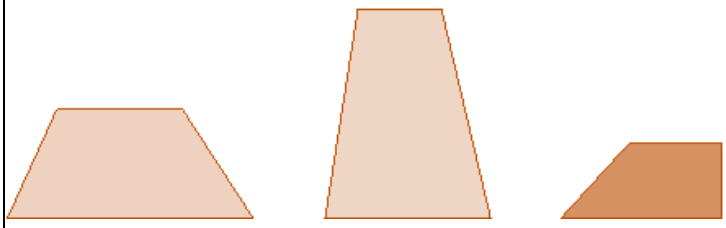


The sum of the angles of a square is 360° $degrees$

Parallelogram
A four-sided polygon with two pairs of parallel sides.



The sum of the angles of a parallelogram is 360° $degrees$

Rhombus	**Trapezoid**
A four-sided polygon with all four sides of equal length	A four-sided polygon with an exactly one pair of parallel sides. The two sides that are parallel are called the bases of the trapezoid.
	
The sum of the angles of a rhombus is 360° *degrees*	The sum of the angles of a trapezoid is 360° *degrees*

15 What shape am I?

a) four sides; all sides equal; four right angles _____

b) four sides; opposite sides equal; four right angles _____

c) four sides; opposite sides parallel; no right angles _____

d) four sides; exactly two sides parallel _____

e) four sides; opposite sides equal; no sides perpendicular _____

f) four sides; opposite sides parallel; adjacent sides perpendicular _____

g) four sides; all sides equal; no sides perpendicular _____

h) four sides; no sides parallel; no sides perpendicular _____

Challenge Yourself

16 Solve each word problem:

a) A line segment was split into 8 parts. Each part was further split into 5 sections. How many sections was the segment split into?

_____

b) A watermelon can be balanced on a scale by ***x*** apples. An apple can be balanced by ***q*** strawberries. How many strawberries are needed to balance a watermelon?

_____