

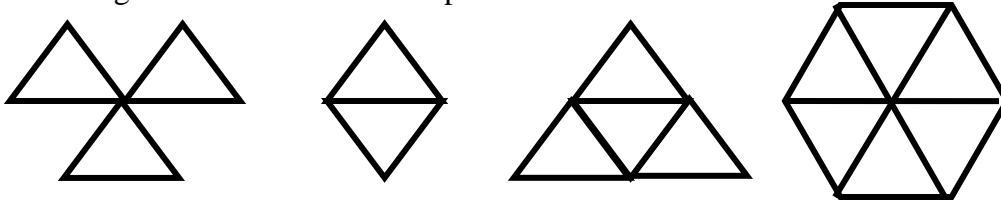
SECTION

3

Suggestions for helping your child find the answers Kindergarten, Worksheet I

1. **Answer: The worm on the bottom and the fire truck on top are circled.** To help your child with this concept you can use some string to measure the objects and have them compare the lengths of the string. You might want to measure “up and around” the worms to get their lengths, if your child finds the problem easy.

2. **Answer: Answers will vary.** The child will use some or all of the 6 triangles to create other shapes and designs. Here are some examples:



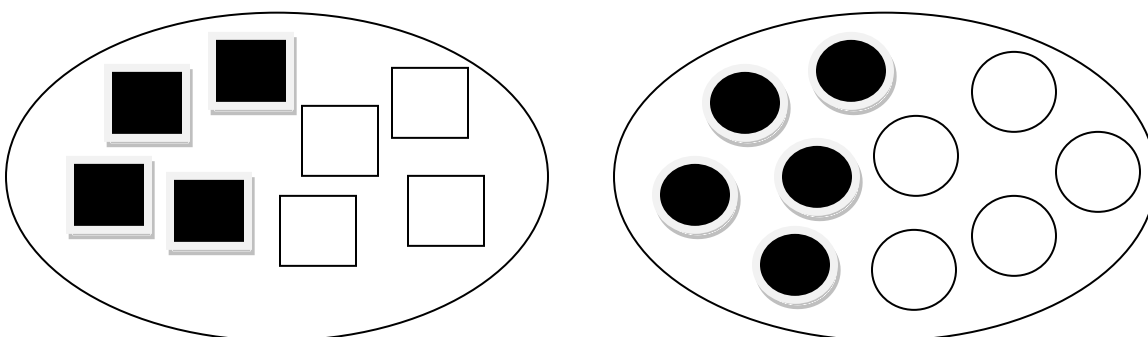
3. **Answer: 5, 7, and 9 should be written, and 5, 7, and 9 circles drawn.** The child should write the numerals for the numbers five, seven, and nine. Also have the child count out each number showing that amount in circles, or better yet, have the child use circular objects—Cheerios, Fruit Loops, pennies, for example—to show the numbers 5, 7, and 9. (Note: the word “numeral” refers to the written symbol for the number of objects under consideration. For example, “6” is the numeral that represents the number six. We don’t use “numeral” in the problem because young children will have never heard that word.)

4. **Answer: teepee, triangular ruler, triangle used for music, yield sign**

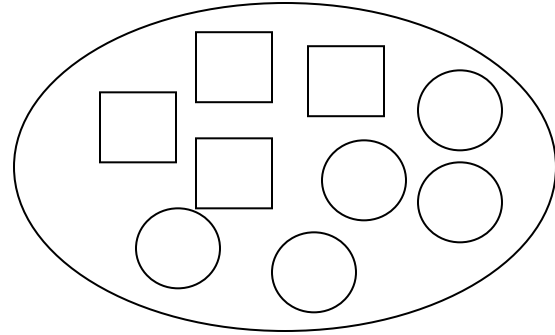
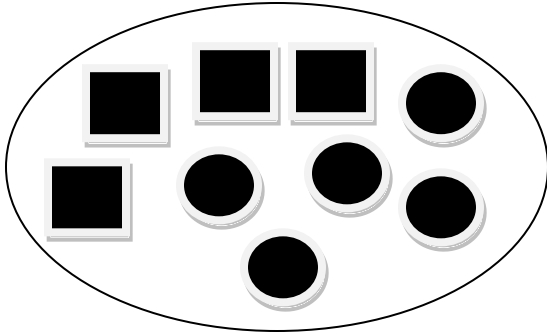
They are all triangles because they have only 3 sides. The other objects have curved sides or more than 3 sides total. An interesting conversation to have with your child is the number of triangles they can find in some shapes. For example, three of these shapes with triangle—the teepee, the triangular ruler, and the yield sign—have two triangles each.

If your child is ready for this conversation, you might mention that a real teepee is not a triangle—it’s a cone, a 3-dimensional shape. But the picture of a teepee forms a triangle. And the “music triangle” isn’t technically a triangle because of the gap shown. However, if the gap were eliminated by extending the sides, the shape would be a triangle.


5. **Answer: Part A: The child should put all squares in one set and all circles in one set.**



Answer: Part B: The expected answer is that the child will put all black (solid) shapes in one set and all white shapes in another set. Other answers might be possible.



Suggestions for helping your child find the answers Kindergarten, Worksheet II

- 1. Answer:  is the cylinder. Answers will vary in terms of what a cylinder looks like.** Have manipulatives available for your child. Point out the differences in 2-dimensional shapes—circles, squares, etc.—and 3-dimensional shapes. Squares, circles and triangles are flat, and can be shown on a sheet of paper. Cubes, spheres and cylinders are all three-dimensional; they take up space and so are not flat. Such a shape can be “pictured” on a sheet of paper, but some of it—the thickness—has to be imagined.
- 2. Answer: 8 and 5, with the X on the left-hand set** Your child should count the number of objects in each set and then write the number next to it. To help your child count the sets, have them “check off” objects as they are counted. Some children may have trouble counting the pictures on the paper and might need to count real objects that they can touch and move, as they count. To determine which set has more, have the child pair them up, one star with one moon, till one set is “used up.” Then the set with some objects left unpaired has “extras”, or more, in it.
- 3. Answer: 3 red triangles, 3 blue circles, 3 green squares and 2 orange rectangles** You might discuss with your child what makes something a circle, or a triangle, or a square, or a rectangle. *Circles* are round shapes and have a center point that is exactly the same distance from every point that makes up the circle. *Triangles* are closed shapes made from three line segments that meet at their end points. *Rectangles* have 4 line segments that meet at their endpoints, opposite sides are the same length, and each of its 4 angles is 90° . A square is a special rectangle in which all 4 sides are the same length.
- 4. Answer: 2 squares** The child should recognize that the pattern is a repeating pattern of two squares, then two triangles, and so forth. If the pattern were to continue the next step would be two squares. The child might need to say the words out loud, to hear the verbal reinforcement of the repeating core of the pattern.
- 5. Answer: Thursday** Let your child try to figure this out on his/her own. He/she may not know the days of the week yet--this is ok. Go over the days of the week with them; make sure to write out the name of the days so that your child can become familiar with their spelling. Can your child count the days on a calendar? If not, show him/her how to go across, counting the dates as you go.
- 6. Answer: The answer will be the child’s age in two more years.** This offers an introduction to taking a set of objects—candles in this case—and joining another set to it, and then counting to get “how many in all.”

Suggestions for helping your child find the answers Kindergarten, Worksheet III

1. **Answer: Rectangles, triangles, rhombuses** The child should be able to explain that the shapes are put into sets of the same kind of shape. Set 1 possible explanations could be: all of the shapes have 4 sides, the opposite sides have the same length, all 4 corners are right angles, and so they are all rectangles. Set 2 possible explanations could be: all shapes have 3 sides, there's one right angle, and so they are all triangles. Set 3 possible explanations could be: all of the shapes have 4 sides, all 4 sides are the same length, and they are all rhombuses.

2. **Answer: 8** Let your child solve this in his/her own natural way. Using counters—beans or pennies, for example—to represent the shells will help your child visualize the problem. Or they might draw a picture of 5 shells, then 3 more shells, and count them all.

3. **Answer: Snap, Clap** The child should recognize that the pattern is a repeating pattern; the repeating core is *Snap, Clap, Stomp, Stomp*. You can demonstrate this action by showing the *Snap, Clap, Stomp, Stomp*. Try to get child to repeat your actions, but it may be difficult for them to *snap*. Saying the words *snap, clap, stomp, stomp*, at the same time they do the action, should help.

4. **Answer: smiley face, cd's, and target** The outer edges of these shapes are all circles. Circles have only one edge and it is curved to form a circle. If your child has no trouble recognizing the outer edges as circles, challenge them by counting the number of circles inside each picture. For example, on each CD, they might find 3 circles. On the target, they can also count the inner rings as circles too.

5. **Answer: 11** The child should be able to count each chick individually, or some children may notice that there are 2 rows of five to equal 10, with one row having an extra chick, to total 11 chicks in all. Your child hopefully would write the numeral 11, even though they won't realize at this point that it means "1 group of ten and 1 group of one." If they can say "eleven", however, that's an appropriate answer too.

6. **Answer: Approximately 4 & 3 paper clips long, if you are using small paper clips** The child should actually lay the paper clips end-to-end on the snake and then count how many paper clips it takes to cover the snake. Be sure they start with the edge of a paper clip at one end of the snake, similar to measuring an object by starting at the end of a ruler, not at the number 1 on the ruler, as many children are apt to do.

Suggestions for helping your child find the answers
Kindergarten, Worksheet IV

1. **Answer: Squares, rectangles, rhombuses, kites and triangles might all be made.** Name each shape created and talk about how many sides that shape has. Alternatively, instead of using toothpicks, use crayons, markers, craft sticks, or straws create the shapes.

Examples:



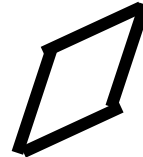
Square



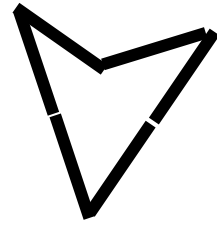
triangle



rectangle



rhombus



kite

2. **Answer: 3** There are three more apples than oranges. Your child can draw a line to match up each orange with an apple, and see that there are three apples left unmatched. Have your child practice this concept of *how many more* in one set than another, using real objects.

3. **Answer: 6** Let your child solve this problem in his or her own way. Have manipulatives such as beans or pennies to show the nine balloons, and three of them are removed to show that they pop. If your child prefers, let them draw the problem on paper or use the picture provided on the worksheet, marking out those that pop.

4. **Answer: Nighttime** Discuss with your child how they knew the answer. Talk about routines that are done in the morning and at night. Also, talk about the difference between morning and night. How can you tell if it is morning? What is the difference between seeing the sun and seeing the moon?

5. **Answer: The circle and rhombus are *over* the dog and so are colored. The rectangle and oval are filled with dots as they are *under* the dog. A triangle should be drawn next to the bone.** The key point to emphasize here is what the spatial words *over*, *under*, *beside*, and so forth, mean. Try to use words like that for a few days and see if your child can learn them. (Note: you might be tempted to call the **rhombus** a **square**, but notice that the 4 angles aren't exactly 90° angles.)

**Suggestions for helping your child find the answers
Kindergarten, Worksheet V**

1. Answer: The package, the dice and the letter block are cubes. The key points that make something a cube are that the shape is 3-dimensional (i.e., not flat like a sheet of paper) and the outer edges of its six faces all form squares. Try to find examples of cubes around your house—a sugar cube, a die, certain cardboard boxes, and so forth.

2. Answer: The truck and elephant are circled. The banana, worm, ladybug, and pencil have an X on them. To help your child with this concept have them pick up some real objects and talk about which ones are heavier and which ones are lighter. Have them put one object in each hand, and act like a 2-pan balance scale, bending down toward the side that is heavier. You could also find some objects that weigh between 1 and 10 pounds each from around your house, weigh them on a bathroom scale, and have the child line them up from lighter to heavier.

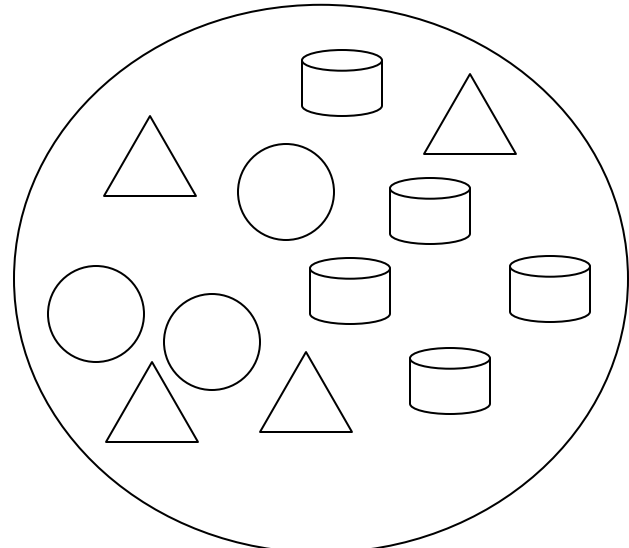
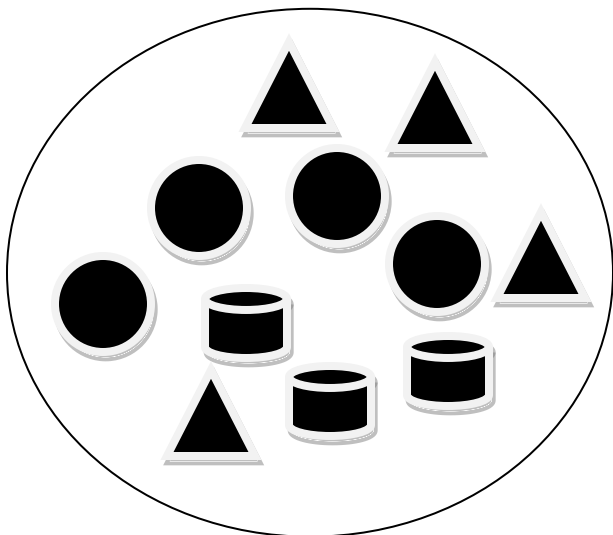
3. Answer: The line of ladybugs would look like:



Start counting from the left and move right. Circle ladybug #2. Draw a line under ladybug #6. Draw a square around ladybug #10.

4. Answer: Set 1 Hopefully the child will recognize that the shapes are circles and are 2 dimensional shapes. The child might say “they are round” or something similar. **Set 2: The child will learn that these shapes are triangles--they have 3 sides, and are 2 dimensional shapes.** He or she made some of these shapes from toothpicks on the last worksheet—you might remind them of that problem. **Set 3: The child might recognize that the shapes are cylinders and are 3-dimensional shapes.** You might hold up a food can as a demonstration for the child.

5. Answer: The child will probably sort the shapes based on whether the interior is black or white. All black shapes go in one set, and all white shapes go in the other set. Or the shapes could be put into 2 other sets, such as circles and cylinders in one set, and triangles in the other set.

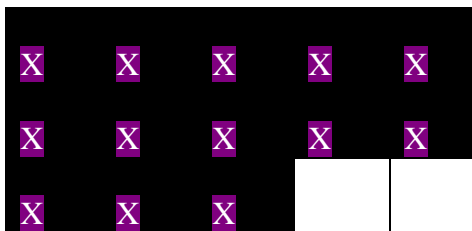


Suggestions for helping your child find the answers Kindergarten, Worksheet VI

1. **Answer: Duck** The child might recognize the repeating pattern has a core of 1 frog, 2 ducks; 1 frog, 2 ducks; 1 frog, 2 ducks, and so forth. Be sure the child starts on the left-hand end, and have them say the names in order—frog, duck, duck, frog, duck, duck, and so forth. The oral pattern will help them realize what comes next.

2. **Answer: coke can, trash can, can of green beans, soup can** Cylinders are shapes that are circular in the middle but have a top and a bottom to them. They are 3-dimensional. You might have the child look for cylinders around the house—a can of soup, a drum, a drinking glass, and so forth.

3. **Answer: 13 squares are colored** The child should color in 13 squares in any order. There will be two uncolored squares in the large rectangle.



4. **Answer: 1st picture = 2, 2nd picture = 1** The key point here is for the child to learn about *time* in a global sense, not down to the hour or minute. The picture of the child brushing their teeth comes *before* the children getting on the bus to go to school. Go over morning routines with your child—what are some other events that routinely occur before school? How are these routines different than the afternoon routines? What are some characteristics your child can see that show the difference between daytime and nighttime? Example: It is dark outside or the moon is up at night, but during the day they might see clouds in the sky.

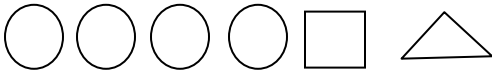
5. **Answer: 5** You might give your child manipulatives to help assist with solving this problem. They would follow the action in the problem by putting out three counters for the first plants, then two more counters for the additional plants. Let them draw a picture of the flowers in the problem. Encourage the child not to draw a picture that is very detailed for the flowers, but just to represent the flowers with simple checks or boxes. (You are encouraging the child to make a more *abstract* drawing this way, which pays off in later math courses.)

6. **Answer: 4** Again, manipulatives can be used to follow the action of the problem—have the child put out 9 counters for lollipops, and remove 5 for those given away, counting what's left. Or a drawing can be made of 9 symbols for the original lollipops, with 5 of them marked out to show those given away, counting those left unmarked.

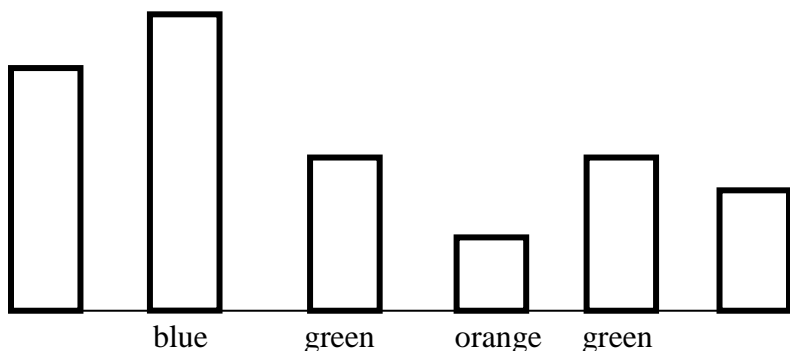
Suggestions for helping your child find the answers Kindergarten, Worksheet VII

1. **Answer: 3 triangles, 3 circles, and 13 rectangles** Extend this problem by having your child create her or his own “shape picture.” Count and name all of the shapes in the drawing. Be careful not to say *a square is not a rectangle*, because a square is a special rectangle—one with all sides equal in length.

2. **Answer: The baseball and the basketball are spheres.** Show your child real-world examples of spheres, such as a tennis or golf ball, or a globe, or a ceiling light fixture. Mention that all these shapes are three-dimensional, round and can roll along a straight line, like a ball. A sphere is different from a cylinder because a cylinder is flat on two ends, whereas a ball is completely round. Cubes cannot roll because of all the flat edges on them. An egg can roll, but not along a straight line—so it’s like a sphere in one way—no flat faces—but is not a sphere. (Note: a *sphere* is the 3-dimensional counterpart of a circle. A *sphere* has a center point and all the edge points are equidistant from the center point.)

3. **Answer: 4 circles, a square, and a triangle**  When you first read this problem to the child, reinforce that this pattern is a *growing* pattern. That means that, on a regular basis, part of the pattern has more pieces in it than previously. In this case, there is one circle followed by a square, then a triangle. Then there are 2 circles, followed by a square, then a rectangle, and so on. Have the child repeat the words *circle*, *square*, and *triangle* as you point to each shape in order, starting from the left. You can have your child extend the growing pattern beyond the answer above to see if they can find the next set—5 circles followed by a square and a triangle.

4. **Answer: Starting from the left – 2nd rectangle blue, 4th rectangle orange, 3rd and 5th rectangles green**



5. **Answer: Circles, triangles, and rectangles** Have your child trace the outer edge of each figure with her or his finger. Have your child go on a shape walk and look for other circles, triangles, and rectangles in the local environment. (Note: The musical triangle isn’t technically a triangle since there is a gap shown, but it’s close enough so we’ll call it a triangle.)

Suggestions for helping your child find the answers Kindergarten, Worksheet VIII

1. **Answer: July, 2009** Review the months of the year with your child, in order, using a calendar from around your house. Find and mark significant dates for them—today’s date, birthdays, holidays, and so forth. Can he or she tell the difference between the days of the week and the month? If not, go over the days of the week with your child. Also, show your child where the month is placed on a calendar. If your child is confused with the months of the year and the days of the week, show them each area separately. Go over the months and then review the days of the week a little while later. If you want, you can even create little songs to help your child remember the days of the week or the months of the year. Your child’s Kindergarten teacher or preschool teacher might have songs available that you can copy or buy.

2. **Answer: Answers will vary.** The key words to emphasize here are *more than*, *less than* and *the same number as*. Have the child first count how many dots are in the sample box. The first box should have *more than 7* dots. The second box should have *less than 7* dots. The third box should have *exactly 7* dots.

3. **Answer: 2 X’s, 8 X’s, 20 X’s** Hopefully the child can count out how many each set should have and make that many marks with a pencil. If the child is having difficulty, instead of using X’s, use counters that they can physically touch, such as paperclips, pennies, beans, etc.....

4. **Answer: Answers will vary.** The child could create several different patterns; either a simple repeating pattern or a more difficult growing pattern. Repeating patterns have a *core* that stays the same throughout the pattern. Have the child say the shape verbally as he or she points to it with their finger.

Repeating patterns might include (*core* is underlined below):

- circle, triangle, circle, triangle, circle, triangle,
- triangle, circle, rectangle, triangle, circle, rectangle, triangle, circle, rectangle, ,.....
- rectangle, circle, circle, rectangle circle, circle, rectangle, circle, circle, ,.....

Growing patterns might include (growing part is underlined):

- triangle, circle, rectangle, triangle, circle, circle, rectangle, triangle, circle, circle, circle, rectangle,.....
- rectangle, circle, triangle, rectangle, circle, triangle, triangle, rectangle, circle, triangle, triangle,.....

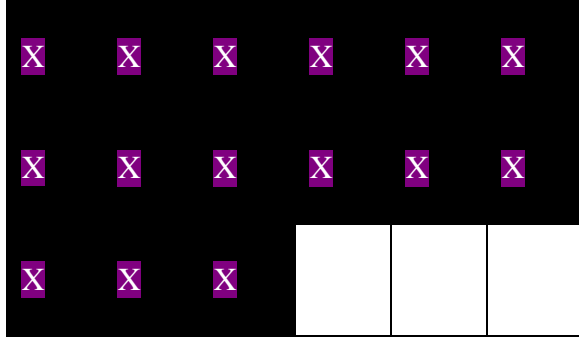
5. **Answer: 8** Encourage your child to solve this problem with counters—beans, pennies, paper clips, etc. —or a drawing. Her or his actions will most likely show the action of the problem. They will put out 4 counters or make 4 symbols for the cars he had to start, then add 4 more counters or symbols to show the additional ones he got. Then they will count them all to find the answer. If your child is comfortable using just their fingers to count, that is ok as well.

6. **Answer: Things that are alike include all sides are made with straight lines, the figures all have “corners” or angles and they are all “closed” figures. Things that are different include the triangle having only 3 sides while the square has 4 sides which are all the same length.**

7. **Answer: Answers will vary.** The child could come up with several possibilities for faces of objects that look like squares—a window pane, a picture frame, the face of a tissue box. When he or she is finding squares, they should notice that it has 4 sides and 4 right angles, with all sides the same length. The child might pick out rectangles which also have 4 sides and 4 right angles, but all four sides are not necessarily the same length. (Squares are “special” rectangles, but not all rectangles are squares.) If your child can’t find any squares in their bedroom, expand the search to other rooms of the house.

Suggestions for helping your child find the answers
Kindergarten, Worksheet IX

1. **Answer: 15 squares should be colored, leaving 3 not colored.**



2. **Answer: The X should be on the triangle.** The triangle does not belong because it is a three-sided shape and all the rest of the shapes are four-sided shapes. Have your child practice naming the shapes—from the left, they are *square*, *rectangle*, *triangle*, and *kite*. Since the square is also a rectangle, your child might also say *rectangle*, *rectangle*, *triangle*, *kite*.

3. **Answer: The first figure from the left is a rectangular prism.** A rectangular prism is a three dimensional shape with 6 flat faces, and those faces are rectangles. The cola can shows a real-world example of a *cylinder*, the football is an example of an *ovoid*, and the ball is a *sphere*. (Note: *ovoid* is not a name that your child will have to learn in school.)

4. **Answer: 6** The child should count 6 balloons, and write “6”.

5. **Answer: 3** Encourage the child to use counters or a drawing. He or she will likely show the six balloons to begin, then show one of them popping and two more drifting away. Three balloons will be left.

6. **Answer: 9, 13, and 8** Discuss how in the first two rows the numbers from left-to-right are getting bigger and in the third row the numbers are getting smaller. Or, in the last row, they are getting larger from right-to-left.

7. **Answer:** 

Have the child say the words *heart*, *triangle*, *arrow* repeatedly as they touch each object in turn, going left-to-right and then starting each new row at the left. The child should see and hear the repeating pattern. For a challenge, you might extend the pattern another row or cover up a picture and determine if they can fill in a missing piece of the pattern.

Suggestions for helping your child find the answers
Kindergarten, Worksheet X

1. **Answer: Shapes with curves – circle and oval; Shapes with 4 sides – rectangle and 2 squares; Shapes with 3 sides – 2 triangles; Shape with 6 sides – hexagon** Have your child count the number of sides on the shapes made from straight lines, checking them off as they count so they don't count the same side twice. If they have difficulty, then have them make the shapes out of toothpicks and count the number of toothpicks it takes for each shape. You might show them some road signs, like those below, to show them these shapes in the world around them.



2. **Answer: See below.** Discuss with your child that each row has 5 boxes in it. Have them touch each box in turn, as they count from 1 to 20.

1	2	3	4	5
6	7	8	9	10

11	12	13	14	15
16	17	18	19	20

3. **Answer: 8 belts** Encourage your child to use counters or make a drawing to show the action in the problem. They can show each belt with a counter or a line (if drawing a picture), then remove 4 counters or erase 4 lines, and count those that are left.

4. **Answer: 10 socks** A key point in this problem, that needs discussing, is what *pair* means. Point out that people are (usually) born with a pair of hands, a pair of eyes, a pair of feet, a pair of ears, and so forth. The child might then solve this problem by using 5 pairs of socks of their own, and then counting the socks individually. They might enjoy learning to “count by two’s”, which is very appropriate for counting items that come in pairs—socks, shoes, gloves, pieces of bread needed for sandwiches, and so forth.

5. **Answer: The X should be on the oval.** The oval does not belong because it is the only shape made with curved lines and so has no “straight-line” sides. The rest of the shapes have sides that can be counted and are made with straight lines.

6. **Answer: The drawing to the left of the gingerbread man is the shortest and the drawing to the right is the tallest.** The key point here is for the child to understand the terms *shorter* and *taller*. You might reinforce this by having the child find 3 things around your house that are shorter than the child, and 3 that are taller.



Thank You!