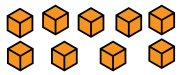
Math Milestones™ — Kindergarten

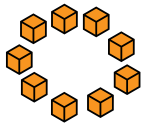
Math Milestones

K:1 How many blocks?



[Student tells how many.]

[Teacher slowly rearranges.]



If you count the blocks, how many do you think there will be?

K:2 There are 4  books on the floor

and 6  books on the bed.

How many  books are there?

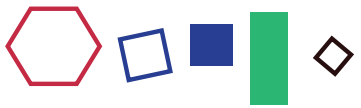
K:3 Say the counting numbers. Also say the missing numbers.

☞ 9 10 11 ____ ____ 14

☞ 55 56 57 58 59 ____

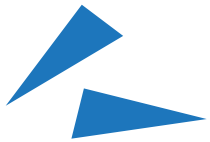
K:4 Are both of the bears correct?

[Student uses manipulatives to answer.]



"There are 3 squares."

"These two triangles can be put together to make a new triangle."



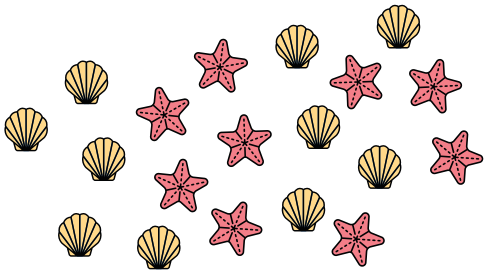
K:5 [Teacher puts 3 red counters on table.]

Put some blue counters here to make 10 counters in all. [Student completes this task.] **How many counters did you add?**

[Student determines the answer.]

Write the missing number: 3 + ____ = 10

K:6 Are there more  shells or more  sea stars?



K:7 Hazel told a story. Write or say two numbers that will make Hazel's story true.

I have 10  pennies in my hands.

I have _____  pennies in my left hand.

I have _____  pennies in my right hand.

What other numbers will also make Hazel's story true?

K:8 [Teacher holds out 5 paper clips.]

How many do I have?

[Student counts the paper clips.]

[Teacher puts both hands behind back, then brings out 0, 1, 2, 3, 4, or 5 paper clips in one hand.] **How many are in this hand?**

[Student counts the paper clips.]

How many are in my other hand?

K:9 6 5

Point to the greater number. [Student points.] **Tell me how you decided.**

K:10 5  dogs were playing.

Then 3 more  dogs came.

How many  dogs are here now?

K:11 9  birds were in a tree.

5  birds flew away.

How many  birds are there now?

K:12 Draw 16 circles. Use a [favorite color] marker for 10 of them. Use a pencil for the rest. [Student draws.]

How many are [favorite color]**? How many are in pencil?**

Write the missing number: 16 = 10 + ____

K:13 Write or say the missing numbers.

3 + 1 = _____ 2 + 3 = _____

5 + 0 = _____ 2 − 2 = _____

4 − 3 = _____ 5 − 3 = _____

K:14 Are there more land animals or more sea animals?

elephant

clownfish

gorilla

dolphin

mantis

snake

seahorse

octopus

shark

STUDENT ACHIEVEMENT PARTNERS

Math Milestones™ Task List — Kindergarten

The 14 Math Milestones™ tasks for kindergarten have been carefully crafted to embody kindergarten mathematics on one page.

K:1	How Many Blocks?	✋	C P	K.CC.B.4
K:2	Two Groups of Books		C A	K.OA.A.2
K:3	Say the Numbers (Teens, Decades)		P	K.CC.A.1, 2
K:4	Bears Talk About Shapes	✋	C	K.G.A.2, K.G.B.4,6
K:5	Adding to Make a Group of Ten	✋	C	K.OA.A.4
K:6	More Shells or More Stars?		C P	K.CC.B.5
K:7	Ten Pennies, Two Hands	✋	C P	K.OA.A.3, 4
K:8	Five Behind the Back	✋	C	K.OA.A
K:9	Compare 6 and 5		C P	K.CC.B.4c, K.CC.C.7
K:10	Hello, Dogs		C A	K.OA.A.2
K:11	Bye-Bye, Birds		C A	K.OA.A.2
K:12	Make Ten and Some More		C	K.NBT.A.1
K:13	Fluency within Five		P	K.OA.A.5
K:14	Animals from Land and Sea	✋	A	K.MD.B.3

C = Task has a conceptual focus. P = Task has a procedural skill & fluency focus. A = Task has an application focus. ✋ = Task is designed for use with manipulatives or objects. Students might also use manipulatives to support their work on other tasks.

Standards for Mathematical Practice

MP.1	Make sense of problems and persevere in solving them.	K:5–8, K:12
MP.2	Reason abstractly and quantitatively.	K:1, K:5, K:8, K:9, K:12
MP.3	Construct viable arguments and critique the reasoning of others.	K:9
MP.4	Model with mathematics.	K:2, K:7, K:10, K:11, K:14
MP.5	Use appropriate tools strategically.	K:4, K:5
MP.6	Attend to precision.	K:3, K:6, K:13
MP.7	Look for and make use of structure.	K:5, K:12
MP.8	Express regularity in repeated reasoning.	K:3, K:7

Standards codes refer to www.corestandards.org. One purpose of the codes is that they may allow a task to shed light on the Standards cited for that task. Conversely, reading the cited Standards may suggest opportunities to extend a task or draw out its implications. Finally, Standards codes may also assist with locating relevant sections in curriculum materials, including materials aligned to comparable standards.

Math Milestones™

Math Milestones™ was created by Jason Zimba, John W. Staley, Elizabeth Meier, Sandra Alberti, Harold Asturias, and Phil Daro.

Math Milestones™ tasks are not designed for summative assessment. Used formatively, the tasks can reveal and promote student thinking. Student work on tasks could be collected in student portfolios.

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