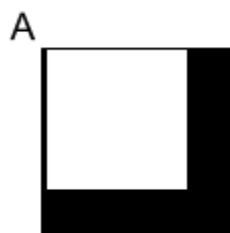


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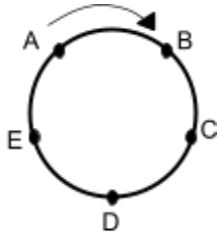
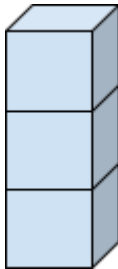
Exam for Grade 4

February 18, 2023

A 5 Points	What number can replace the square to make the statement true? $5 \times 11 = \square + 12$
B 10 Points	In all, how many two-digit prime numbers have 4 as one of their digits?
C 9 Points	A rectangle has a perimeter of 2 meters and a length of 70 centimeters. Find the area of the rectangle in square centimeters.
D 13 Points	In the figure shown, two squares share corner A. The larger square has an area of 49 sq cm. The smaller square has an area of 25 sq cm. What is the perimeter of the shaded region, in cm? 
E 8 Points	In all, how many whole numbers between 400 and 600 are divisible by 9?

Exam for Grade 5

February 18, 2023

A 4 Points	An ant travels around the circle in the direction shown. It touches each of the labeled points in order. The first three points that the ant touches are A, B, and C, in that order. What is the 28th point that the ant touches? 
B 8 Points	If a three-digit number is divided by 5 or by 6, the remainder is 1 in each case. What is the least such three-digit number?
C 8 Points	Mr. Jackson was born on January 1, 1970. His daughter Lea was born January 1, 1992. In what year was Mr. Jackson exactly three times as Lea?
D 12 Points	How many 3-digit numbers are multiples of 21?
E 13 Points	Three identical cubical boxes form a stack. It takes 350 sq cm of wrapping paper to completely wrap the whole stack with no overlap. Suppose each cube is wrapped separately and completely instead. What is the least amount of additional paper that is needed, in sq cm? 

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Exam for Grade 6

February 18, 2023

A 7 Points	The digits of a four-digit number are 1, 3, 6, and 9, but not necessarily in that order. The thousands digit is prime. The hundreds digit is 3 more than the tens digit. What is the number?
B 8 Points	The arithmetic mean (average) of five numbers is 8. Two of the numbers are 2 and 5. The other three numbers are equal. What is the value of one of the three equal numbers?
C 8 Points	The floor of a rectangular room is completely covered with square tiles. The room is 9 tiles long and 5 tiles wide. Find the number of tiles that touch the walls or door of the room.
D 14 Points	1 blue marble and 2 green marbles cost 16 cents. 1 red marble and 2 blue marbles also cost 16 cents. 1 green marble and 2 red marbles only cost 13 cents. How much does 1 green marble cost?
E 9 Points	What is the least prime number that is a divisor N? $N = (13 \times 17) + (19 \times 23)$

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Exam for Grade 7

February 18, 2023

A 4 Points	Zach buys two hot dogs and three drinks for \$14. Drinks cost \$2 each. How much does one hot dog cost?
B 8 Points	Staci looks at the first and fourth pages of a chapter in her book. The sum of their page numbers is 47. On what page did the chapter begin?
C 7 Points	The sum of three whole numbers, A , B , and C , is 32. C is 10 more than A . B differs from one of the other numbers by 3 and the other by 7. Find B .
D 12 Points	Each of Mia's marbles show several colors. $\frac{2}{5}$ of the marbles show some red. $\frac{3}{4}$ of the marbles show some yellow. $\frac{6}{7}$ of the marbles show some blue. Mia has fewer than 250 marbles. How many of Mia's marbles show some blue?
E 13 Points	A rectangular solid that is 4cm by 6cm by 8cm is painted on all six faces. Then the solid is cut into cubes that measure 2 cm on each side. How many of these cubes have only one face painted?

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Exam for Grade 8

February 18, 2023

A 4 Points	How many digits are in the product of the following: $2 \times 3 \times 5 \times 2 \times 3 \times 5 \times 2 \times 3 \times 5$
B 11 Points	A toll bridge charges \$4 for a car and \$6 for a truck. One day 200 of these vehicles crossed the bridge and paid a total of \$860 in tolls. How many of these vehicles were trucks?
C 12 Points	Group A has 10 numbers with an average of 10. Group B has 20 numbers with an average of 20. Group C has 30 numbers with an average of 30. Group D has 40 numbers with an average of 40. The four groups are combined into a single group. What is the average of the combined group?
D 10 Points	How many 3-digit numbers have exactly 2 digits that are the same?
E 8 Points	What number exceeds 23 by 4 more than twice the amount by which 15 exceeds -3?