

## HINTS

42	It is not $\frac{3}{4}$ .
44	If $\frac{3}{8} = 15$ , then how many marbles would equal $\frac{1}{8}$ ? How many would equal $\frac{5}{8}$ ?
68	Look for triangles.
84	Do not use your calculator for this problem.
89	First, add the seven and the negative seven. Can you find more shortcuts to make the addition easier?
92	In this problem, (and in many of the problems), there is one portion that is easy to solve. When you know that solution, you can then solve another portion, and then you will be able to finally answer the question. For this problem, start by using one of the numbers and the $\sqrt{\quad}$ (square root) symbol on your calculator.
106	The answer is not \$14.00 and the answer is not \$26.32.
111	Be sure you understand what " ... " means in this problem.
119	Assume the diagonal shown is line AE. Line AC is also a diagonal. Line BH is also a diagonal.
137	Think of the squares that are 2-digit numbers. Which one is divisible by 12. Or think of the multiples of 12. Which 2-digit multiple is also a square?
140	Multiply 1 times ? Multiply 5 times ? Multiply 10 times ? Multiply 25 times ?
180	Add zeroes to make it easier to compare
188	This is easy, it only takes a few seconds, you can do it in your head.
189	Start at the end, do the opposite operations. e.g. 20-12 ...
195	Think of the word "and" as a decimal point.
199	The answer is not \$29.70.
211	First you will need to find the length of one side of the base of the pyramid.
216	What is 1 + 30? What is 2 + 29? What is 3 + 28? What is 4 + 27?
220	Draw a picture of the canoes. What do you know so far?
222	Concentrate on solving the 3 to 5 ratio first.
236	The answer to 235 is not the same answer as 236.
248	If this shape were made out of sticks, the perimeter would be 8 sticks.
294	Remember, the area is 96 sq. units.
314	Be careful on the first floor.
374	If he went one more mile, would that be a palindrome? Remember, the first digit and the last digit have to be the same.
379	Look at the picture and compare the sides of the small squares to the sides of the large square.
384	Think decimal point when you see the word "and". Remember that zero can be a place holder.
385	Another way of thinking of this is that he put 40 cents plus 10 cents on June 1. He put 40 cents plus 20 cents on June 2. He put 40 cents plus 30 cents on June 3.
389	Don't use your calculator.
390	Use your calculator.

401	How many toothpicks would you need to make a triangle? (How many sides?) How many toothpicks would you need to make a hexagon?
403	270° clockwise is the same as 90° counterclockwise.
406	If Shawn can do the entire job in 40 minutes, how much will he accomplish in 20 minutes?
407	How much is $25 + 10 + 5 + 1$ ?
411	What's the total amount?
443	Try adding and multiplying some odd and even numbers.
461	The answer is not 48 square inches, in fact it is more than 48 square inches.
479	How much is $6 + 4$ ? The probability that you won't select blue is $\frac{2}{3}$ .
495	If the average of the three smallest numbers is 22, that means that the 3 numbers added up to 66 and then were divided by 3 in order to get the 22.
498	Look at 720. Does it remind you of anything in the Multiplication Table?
502	Draw a simple diagram and label the line numbers.
508	How many two-digit numbers have a 3 in the units place? (That's the numerator.) How many two-digit numbers are there? (That's the denominator.) Be sure to include <u>all</u> the two-digit numbers for the denominator.
509	First determine how many pennies there are.
513	Since S is greater than 26, you don't need to know the value of S to find the <i>median</i> of these five numbers.
514	Since S is <i>greater</i> than 26, you don't need to know the value of S to find the <i>mode</i> of these five numbers. The answer is different from the answer in 513.
522	Each triangle is $\frac{1}{4}$ the area of the original square. You could also have cut the square piece of paper into 4 congruent smaller squares. Each of those would also be $\frac{1}{4}$ the area of the original square. (One fourth of the area of the large square will be the same 81 square units, no matter if it is in the shape of a triangle or the shape of a square.) Next to the square with triangles, draw another square and put dashed lines to show 4 smaller squares. Each of those 4 squares has an area of 81 square units. What does that tell you about the length of each side of a small square? So, how long would one side of the larger square be?  Another way to solve this would be to figure out the area of all 4 triangles combined. That would be the area of the large square which is made up of the 4 triangles. If you know the area of the large square, how would you find the measure of the side of the square?
524	Who cares about the original 6-inch square? Just answer the question.
527	You will need to multiply 10 times something. You will need to multiply 4 times something. You will need to subtract.
529	The other three books will cost between \$7.96 and \$15.49 each. Note: If you think the answer is A, you read the problem too quickly.

530	You could divide 7 by 2 to find out that Pump A can pump 3.5 gallons per minute, and divide 8 by 3 to find out that Pump B can pump 2.66666 gallons per minute. But I don't like working with those numbers. So, how about finding how much they pump in 6 minutes. That will be easy. Just add $7 + 7 + 7$ and then add $8 + 8$ to that sum. So, in 6 minutes there will be 37 gallons in the pool. You need to put 185 gallons in the pool. How many minutes will it take?
560	Write down the perimeters for the first 5 pictures. Do you notice a pattern?
562	Turn your page upside down to look at the figure on the right. Then turn it right side up again and study the 4 figures carefully.
573	<p>The first possible number would be 16. It is the first two-digit number that is 2 more than a multiple of 7. <math>(2 \times 7) + 2 = 16</math>. Is 16 prime? No - because it is even and the only even prime number is 2. So the answer is not 16.</p> <p>Then try <math>(3 \times 7) + 2 = 23</math>. Is it prime? If you add the two digits together do you get 10? If you can answer yes to both conditions, then you have your answer, if not, try the next possibility.</p> <p>Another way to do this is to write down all two-digit counting numbers and then determine which ones are prime and then determine which are 2 more than a multiple of 7. Would this be quicker and easier than the first method?</p>
584	There are more than 7 rectangles.
589	33 divided by 3 is 11.
616	It's easy to spot a multiple of 5 because... . And for a number to be a palindrome, the first digit and last digit have to be the same. So the three-digit palindromes that are divisible by 5 would start with the digit....
618	Use your calculator. Don't try to take shortcuts. "Of" means multiply, for example, 3 rows of 4 desks means $3 \times 4$ . The answer is not 400.
622	A number is divisible by 9 if the sum of its digits is divisible by 9.
646	My favorite number is X. When I add 5 to it and then multiply by 2, I get 30. To find X, start with 30, then divide by 2, then subtract 5.
649	When a number is divided by 2 and has no remainder, we call it an ____ number.
652	You are not allowed to cut the erasers into pieces to make them fit.
654	What if he did the clockwise rotation first, then the two rotations that were counter-clockwise?
696	First multiply the fractions.
704	Draw a simple map with 5 roads from Hereville to Thereville and 4 roads from Thereville to Somewhereville.
710	First add up the coins. Then see what you get if Luis lost a penny. (Subtract 1 from his total money.) Do that for all coins, subtract a nickel, then a dime, then a quarter, then a half-dollar. Remember to subtract each coin from the total. One of these amounts will be EXACTLY seven times as much as his little sister has.
716	First convert the hours and minutes into minutes. Mr. Olson will pay more than Mr. Jones.
772	One way to do this problem is to draw a sketch of the sofa, the framed picture and the edge of the wall. Then write in the measurements that you do know and use the diagram to help solve this problem.

774	270 degrees clockwise is the same as 90 degrees counterclockwise.
832	How old are teenagers? Is the answer 2 teenagers dancing? Is the answer 10 teenagers dancing? Remember, you don't need to find exactly how old the teenagers are, just how many teenagers are dancing.
845	Start at the end, go backwards and do the opposite operations.