STUDENT NAME: _____

B51)

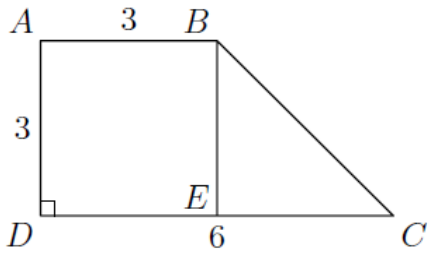
Theresa's parents have agreed to buy her tickets to see her favorite band if she spends an average of 10 hours per week helping around the house for 6 weeks. For the first 5 weeks, she helps around the house for 8, 11, 7, 12 and 10 hours. How many hours must she work during the final week to earn the tickets?

B52)

The average age of 5 people in a room is 30 years. An 18-year-old person leaves the room. What is the average age of the four remaining people?

B53)

In trapezoid $ABCD$, AD is perpendicular to DC, $AD = AB = 3$, and $DC = 6$. In addition, E is on DC, and BE is parallel to AD. Find the area of ΔBEC.



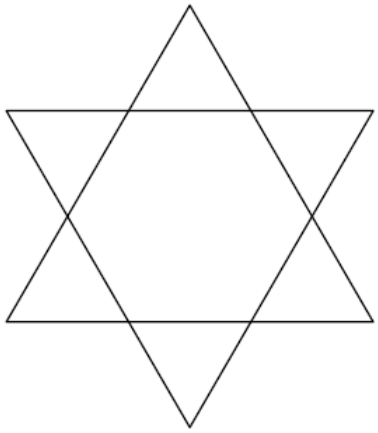
B54)

To complete the grid below, each of the digits 1 through 4 must occur once in each row and once in each column. What number will occupy the lower right-hand square?

1		2	
2	3		
			4

B55)

A unit hexagon is composed of a regular haxagon of side length 1 and its equilateral triangular extensions, as shown in the diagram. What is the ratio of the area of the extensions to the area of the original hexagon?



B56)

On average, for every 4 sports cars sold at the local dealership, 7 sedans are sold. The dealership predicts that it will sell 28 sports cars next month. How many sedans does it expect to sell?

B57)

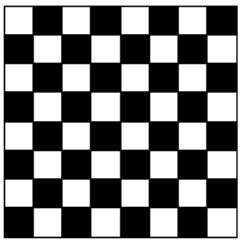
Steve's empty swimming pool will hold $24,000$ gallons of water when full. It will be filled by 4 hoses, each of which supplies 2.5 gallons of water per minute. How many hours will it take to fill Steve's pool?

B58)

The length of a rectangle is increased by 10% and the width is decreased by 10%. What percent of the old area is the new area?

B59)

On a checkerboard composed of 64 unit squares, what is the probability that a randomly chosen unit square does **not** touch the outer edge of the board?

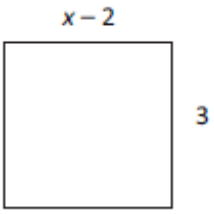


B60)

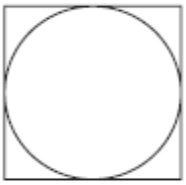
A three-digit integer contains one of each of the digits 1, 3, and 5. What is the probability that the integer is divisible by 5?

B61)

The figure shown is a square. What is the value of x?



B62)



In the figure, a circle with radius 4 ft is inscribed in a square. What is the area of the square?

B63)

What is the greatest prime factor of 96?

B64)

Manny has 5 shirts, 3 pairs of pants, 2 ties and 4 pairs of shoes. If Manny's school uniform consists of a shirt, a pair of pants, a tie and a pair of shoes, how many different uniforms can he wear to school?

B65)

A number is selected at random from the first 20 positive integers. What is the probability the number selected is an odd prime number? Express your answer as a percent.

B66)

What is the product of the greatest and least two-digit prime numbers?

B67)

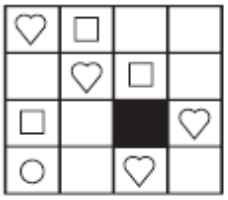
Becca is making 20 craft projects. She has 15 yd of ribbon, and each craft project requires the same length of ribbon. What is the maximum length of ribbon each craft project can require, in inches?

B68)

What is the value of $2 \div 4 \times 8$?

B69)

If each row and each column shown here must contain exactly one heart, square, circle and triangle, which shape must be placed in the shaded space?



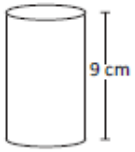
B70)

Two angles of a triangle measure 7 degrees and 97 degrees. What is the degree measure of the supplement of its third angle?

B71)

If $2x + 3 = 4$, what is the value of $12x + 18$?

B72)



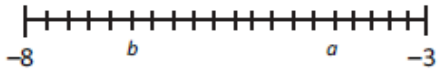
A right circular cylinder has a volume of 144π cm^3 and a height of 9 cm. What is the area of its base? Express your answer in terms of π.

B73)

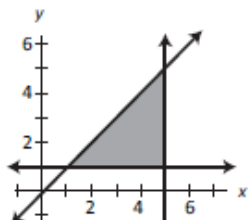
The average of Martha's first 5 rounds of golf is 98 strokes. How many strokes would Martha need to average on her next 3 rounds to bring her average down to 92 strokes?

B74)

On the number line below, the tick marks are evenly spaced. What is the value of $b - a$? Express your answer as a mixed number.



B75)



A region in the coordinate plane is bounded by $y = x$, $x = 5$ and $y = 1$. What is the area of this region?

B76)

A circle has a circumference with the same numerical value as its area. What is its radius?

B77)

What is the positive difference between the range and the mean of the set {4, 5, 7, 7, 8, 8, 8, 9, 16}?

B78)

A rectangle measures 18 m by 24 m. What is the sum of the lengths of its diagonals?

B79)

A student rolls three standard, six-sided dice (one red, one blue and one green). How many possible outcomes are there for the three values showing on the top faces of the dice?

B80)

If the probability that Christoph will get an A on a test is 0.25, what is the probability that he will get an A on the next two tests? Express your answer as a common fraction.