

Math 123
Fall 2017
Dr. Lily Yen

Test 1

Show all your work

Name: _____
Number: _____
Signature: _____
Score: ____/34

Problem 1: In the beginning of our class, a group of ten students shook hands with everyone else. How many handshakes would occur when they were all done?

Score: /2

Problem 2: Suppose you want to share a long strip of fruit loop with your sisters, Annie and Betty. The strip is 60 cm long. Your strip is three times as long as Annie's; and Betty's strip is twice as long as Annie's. Find the length of each person's strip of fruit loop.

Score: /3

Problem 3: Solve this KenKen puzzle:

3-	2÷		4+
	2	4+	
6×			2÷
4+		4	

Score: /3

Problem 4: The movie *Gone with the Wind* was first shown in 1939. How would this year be specified in Roman numerals?

Score: /2

Problem 5: Express 2017 in Babylonian numeral.

Score: /2

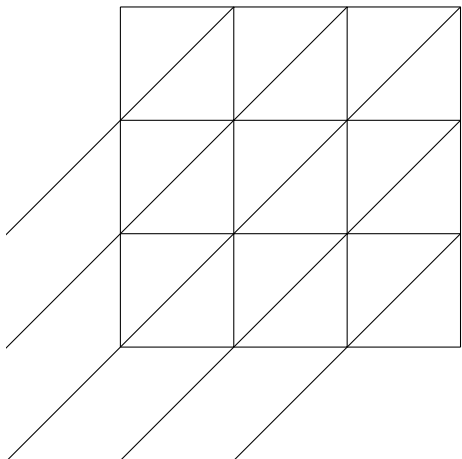
Problem 6: Express 267 as a Mayan numeral.

Score: /2

Problem 7: Convert 37 in base 10 to a binary numeral.

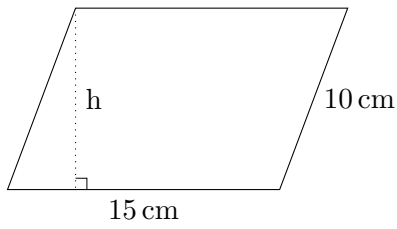
Score: /2

Problem 8: Multiply 931×254 using the galley method.



Score: /2

Problem 9: Given that the area of the parallelogram shown is 120 cm^2 , find its height, h . Include units.



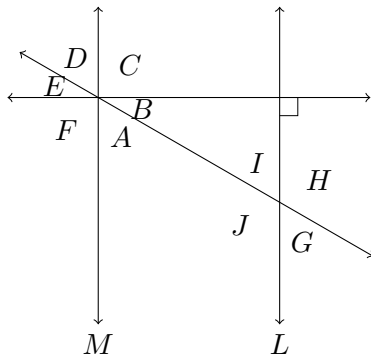
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Problem 10: Lines L and M are parallel. Suppose Angle H is 120° , find the following angles: **State the reason** for each answer.

a. Angle $J =$

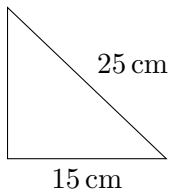
b. Angle $I =$

c. Angle $B =$



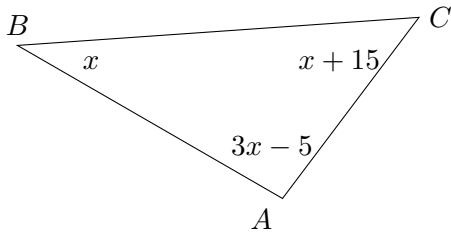
Score: /3

Problem 11: Find the missing side length of the **right** triangle. If necessary, round to nearest thousandths.



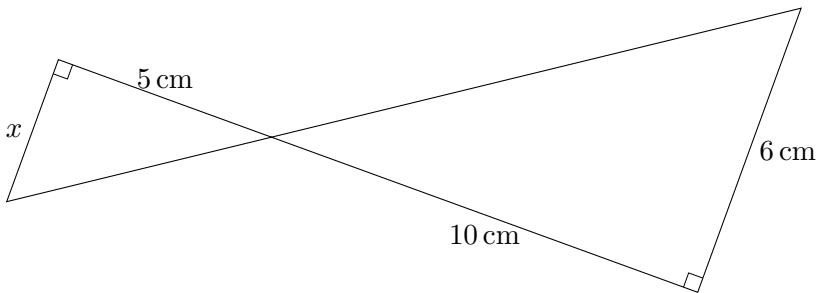
Score: /2

Problem 12: The measures of the angles of the triangle are indicated in terms of x . Find the measure of $\angle C =$.



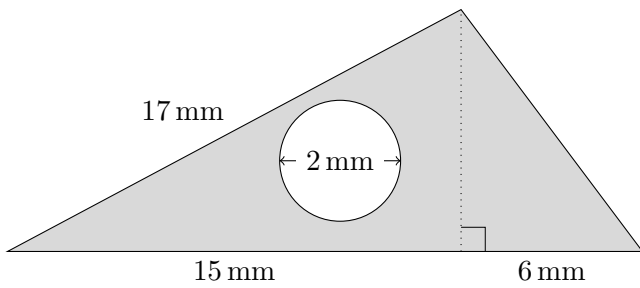
Score: /3

Problem 13: Find $x =$.



Score: /2

Problem 14: Find the **area** of the shaded region. Also find the **perimeter** of the big triangle.



Score: /4