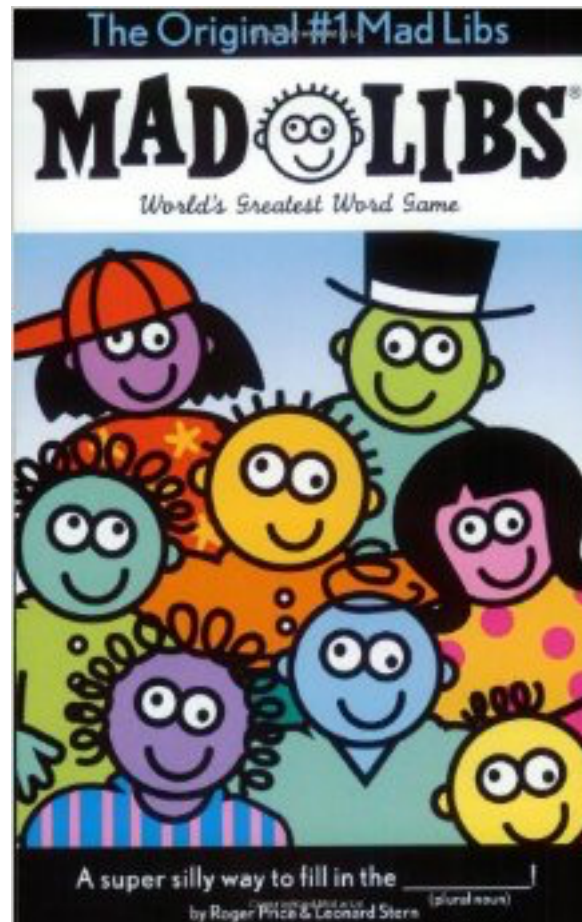
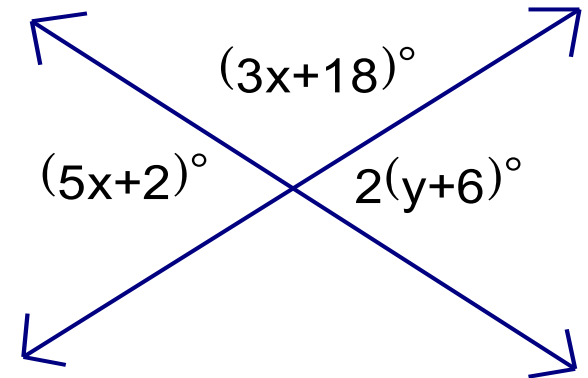


# MATH LIB



# 1

Solve for  $y$  in the diagram.



A) 20

Ms. Whittaker

B) 45

Ms. Glawe

C) 51

Ms. Lee

D) 78

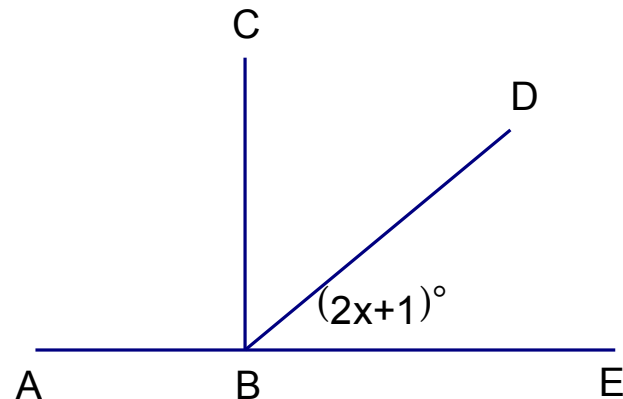
Ms. Vale

E) 102

Ms. Cramarosso

2

$\overline{CB} \perp \overline{AE}$  and  $\overline{BD}$   
bisects  $\angle CBE$ ,  
find the value of  $x$ .



A) 13

excited

B) 28

surprised

C) 45

shocked

D) 90

confused

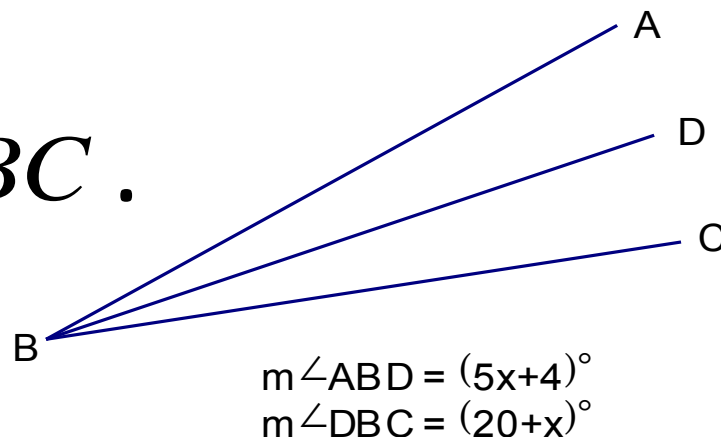
E) None of the above

thrilled

# 3

$\overline{BD}$  bisects  $\angle ABC$ .

Find  $m\angle ABC$ .



A)  $85^\circ$

playing soccer

B)  $24^\circ$

making pancakes

C)  $14^\circ$

juggling

D)  $48^\circ$

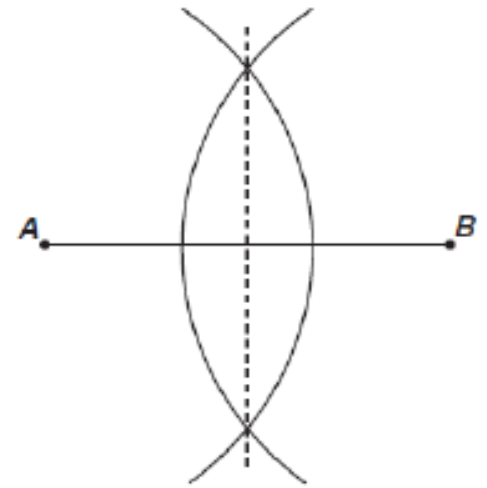
eating pizza

E) None of the above

grading papers

4

What geometric construction is shown in the diagram below?



A) An angle bisector

Taylor Swift

B) A line parallel to a given line

Justin Bieber

C) An angle congruent to a given angle

Fetty Wap

D) A perpendicular bisector of a segment

Ellen Degeneres

E) None of these

Beyoncé

5

N is the midpoint of  $\overline{MO}$ .

P is the midpoint of  $\overline{OQ}$ .

MN = 6 and MQ = 38. Find the length of  $\overline{NP}$ .



A) 6

Friday night

B) 13

Christmas

C) 19

Halloween

D) 26

the 4<sup>th</sup> of July

E) 38

the last day of school

6

A fabric designer is mapping out a new design.

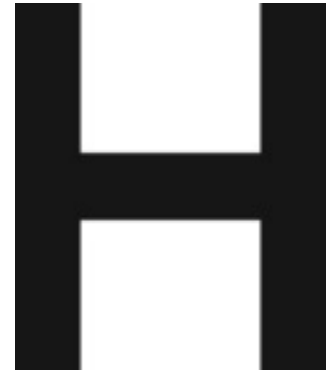
Part of the pattern is formed by a repeating polygon. The initial polygon has vertices  $(-7, 3)$ ,  $(-4, 6)$ ,  $(-1, 3)$ , and  $(-4, 0)$ . The next polygon is a translation of the first along the vector  $\langle 3, -3 \rangle$ .

Which is NOT a vertex of the image?

- |               |                   |
|---------------|-------------------|
| A) $(-1, -3)$ | Planet Hollywood  |
| B) $(3, 0)$   | Universal Studios |
| C) $(-4, 0)$  | Mall of America   |
| D) $(-1, 3)$  | Disney World      |
| E) $(2, 0)$   | Chuck E. Cheese   |

7

What is the angle of rotation and number of rotations to keep rotational symmetry for the figure?



A)  $90^\circ$ ; 2

a hot-air balloon

B)  $90^\circ$ ; 4

a school bus

C)  $180^\circ$ ; 2

a boat

D)  $180^\circ$ ; 4

a wagon

E) None of the above

a gift shop





Which equation represents a line that passes through the point  $(-3, -5)$  and is parallel to the line  $8x + 2y = 2$ ?

A)  $y = -4x - 17$

tu-tus

B)  $y = 4x + 7$

gorilla costumes

C)  $y = 1/4x - 17/4$

pajamas

D)  $y = -4x - 5$

bow-ties

E)  $y = -1/4x - 23/4$

propeller hats

9

When the point  $(-4, 2)$  is rotated  $270^\circ$  counterclockwise about the origin and then reflected across the  $x$ -axis, what is the resulting image?

A)  $(-4, -2)$

solving equations

B)  $(4, 2)$

doing push-ups

C)  $(2, -4)$

wrestling a bear

D)  $(-2, 4)$

dabbing

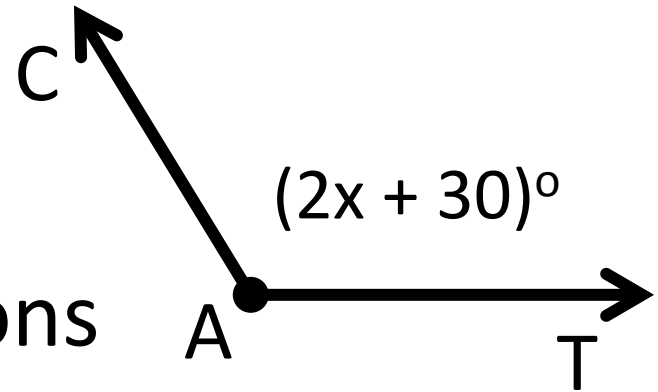
E)  $(2, 4)$

rollerblading

# 10

$\angle CAT$  is an obtuse angle.

Find the restrictions on  $x$ .



A)  $90 < x < 180$

to impress everyone

B)  $30 < x < 90$

to promote world peace

C)  $75 < x < 180$

to end hunger

D)  $75 < x < 90$

to win a bet

E)  $30 < x < 75$

to show how cool math is

# Homework Questions?

(1) \_\_\_\_\_ Ms. Glawe \_\_\_\_\_ was (2) \_\_\_\_\_ thrilled  
to be (3) \_\_\_\_\_ eating pizza \_\_\_\_\_ with (4) \_\_\_\_\_ Ellen Degeneres \_\_\_\_\_ on  
(5) \_\_\_\_\_ Halloween \_\_\_\_\_ at (6) \_\_\_\_\_ Universal Studios \_\_\_\_\_ in  
(7) \_\_\_\_\_ a boat \_\_\_\_\_ wearing (8) \_\_\_\_\_ tu-tus \_\_\_\_\_  
while (9) \_\_\_\_\_ dabbing \_\_\_\_\_ because they wanted  
(10) \_\_\_\_\_ to show how cool math is!!! 😊 \_\_\_\_\_

