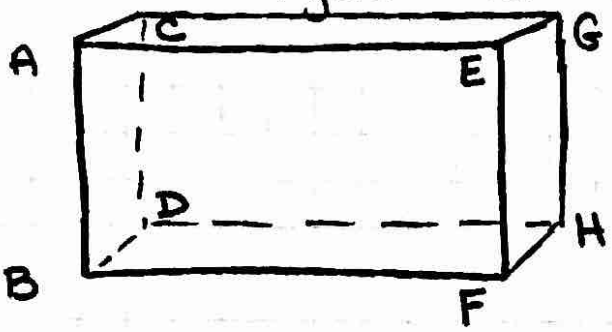
Name:

Math 132 Final

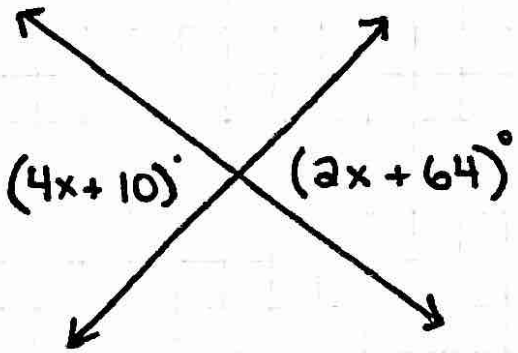
① In the figure below name all segments skew to $\overline{AB}$.



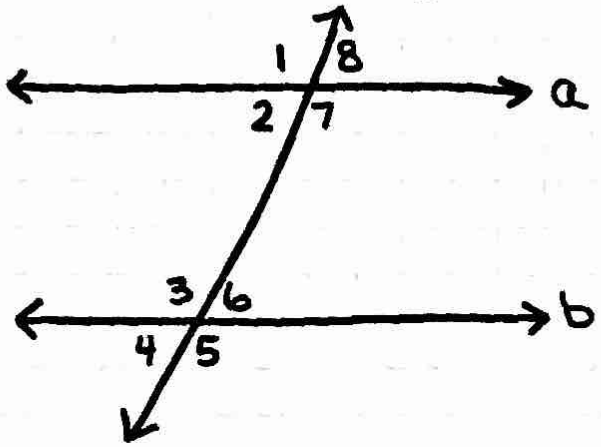
② What is the sum of the angles in a convex heptagon?

③ What is the measure of one exterior angle in a convex regular octagon?

④ Solve for x in the diagram shown below:



⑤ In the diagram shown what type of angles are ∡1 & ∡5?

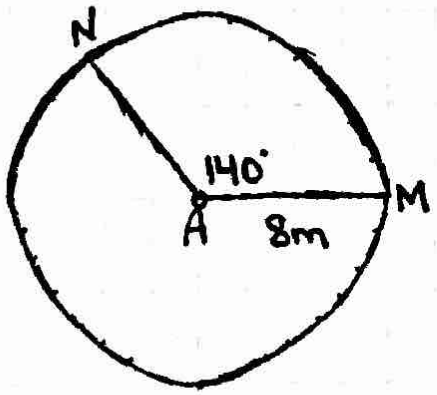


a ∥ b

⑥ Using the diagram <u>above</u> m∡2 = 54° & m∡3 = 2x + 18. What is the value of "x"?

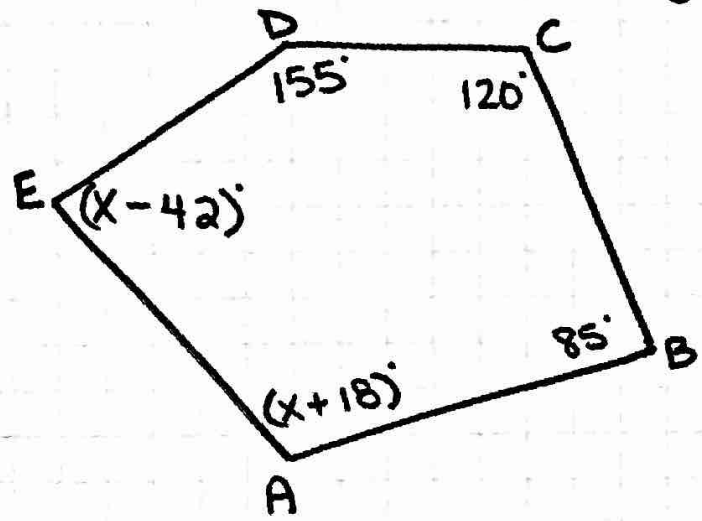
⑦ Convert 42° 18' 30" into decimal form.

⑧



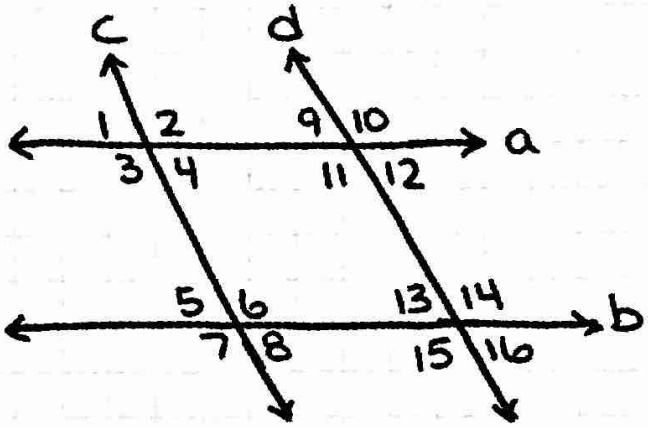
Given this is a circle with the center at A. Find the length of Arc MN.

⑨ Find m∡A in the figure below:



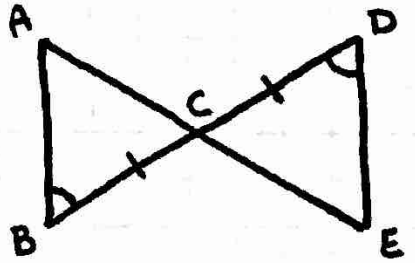
⑩ <u>Given:</u> a ∥ b
c ∥ d

<u>Prove:</u> ∡2 ≅ ∡15

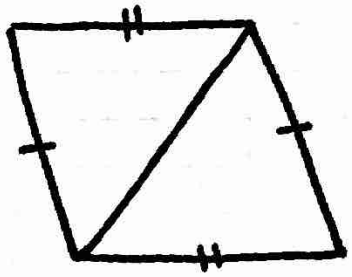


(11) State why each pair of triangles are congruent. If not congruent say "NOT CONGRUENT"

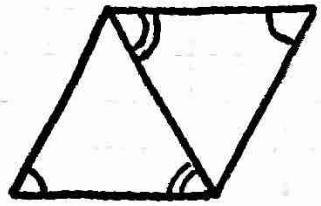
a)



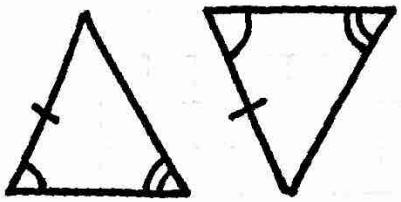
b)



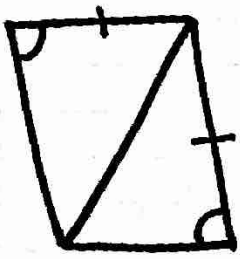
c)



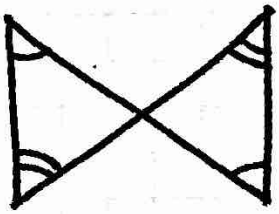
d)



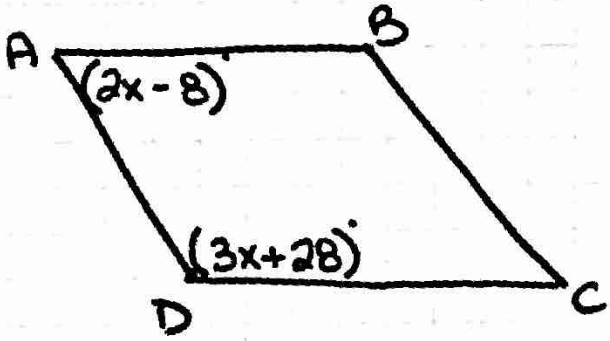
e)



f)

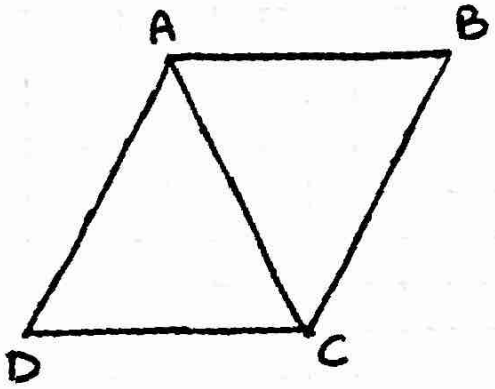


(12) Given ABCD is a parallelogram find m∡A.



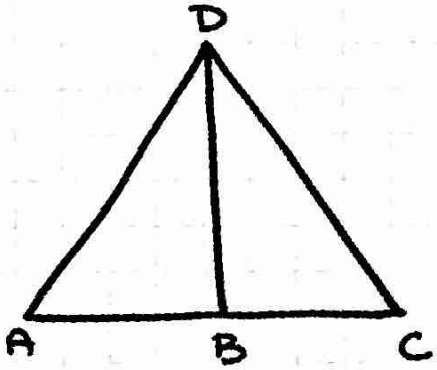
(13) <u>Given</u>: $\overline{AB} \parallel \overline{CD}$
$\measuredangle D \cong \measuredangle B$

<u>Prove</u>: $\overline{AD} \cong \overline{CB}$



(14) <u>Given</u>: B is the midpoint of $\overline{AC}$
$\overline{AD} \cong \overline{CD}$

<u>Prove</u>: $\measuredangle ABD \cong \measuredangle CBD$



(15) For each statement say TRUE or FALSE

a) All rectangles are squares _____

b) The diagonals of a Kite are perpendicular _____

c) All four sides of a rhombus are congruent _____

d) Opposite sides of a Kite are congruent _____

e) Trapezoids only have one pair of parallel sides _____

f) Diagonals of a rectangle bisect each other _____

g) Diagonals of a parallelogram bisect the angles _____

h) Consecutive angles of a square are supplementary _____

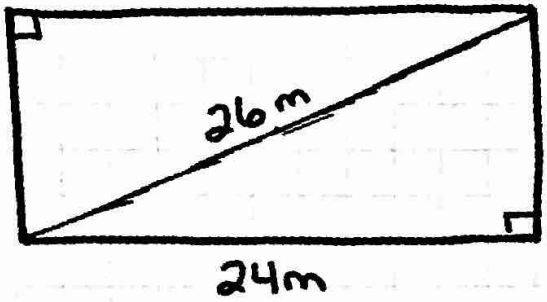
i) Diagonals of a rhombus are congruent _____

j) All sides of an isosceles trapezoid are congruent _____

k) Linear angles are supplementary _____

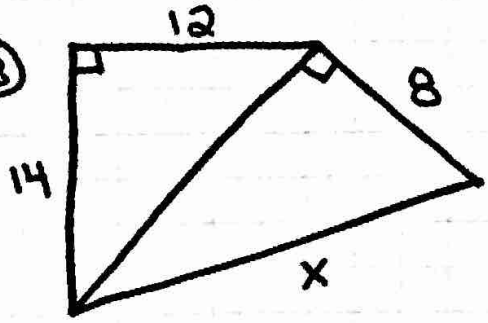
l) Perpendicular lines do NOT intersect _____

(16) What is the perimeter of the rectangle shown?



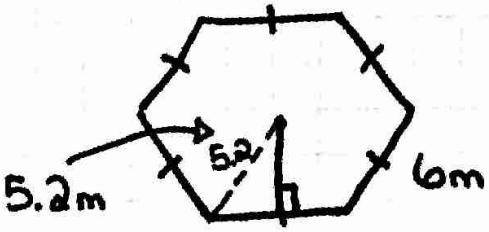
(17) What type of triangle do the sides 8m, 10m, 15m make? (Explain)

(18)

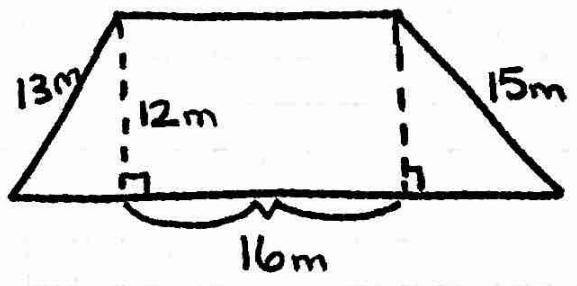


Solve for x: (Round to one decimal)

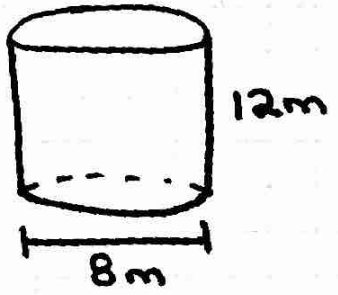
(19) Find area of the figure below



(20) Find the area of the figure below:

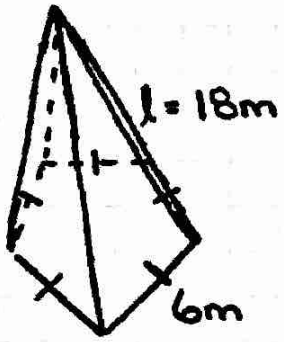


(21) Find Volume of:



(22) Find Surface Area of:

apothem = 4m
height = 14m



(23) What is the distance between A(2, -1, 5) and B(-3, 4, 0) ?

(24) If you reflect point A(-3, 8) over the y-axis and then translate the new point right 5 and down 4 what are the coordinates of the final point ?

(25) If you reflect point B (-1, -5) over the line y = x and then dilate the new point using a scale factor of 3 what are the coordinates of the final point ?