Geometry Final Exam

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MATH

Geometry Final Exam

This exam is comprehensive over the entire course and includes 12 questions. You have 60 minutes to complete the exam.

The exam is worth 100 points. The 8 multiple choice questions are worth 5 points each (40 points total) and the 4 free response questions are worth 15 points each (60 points total).

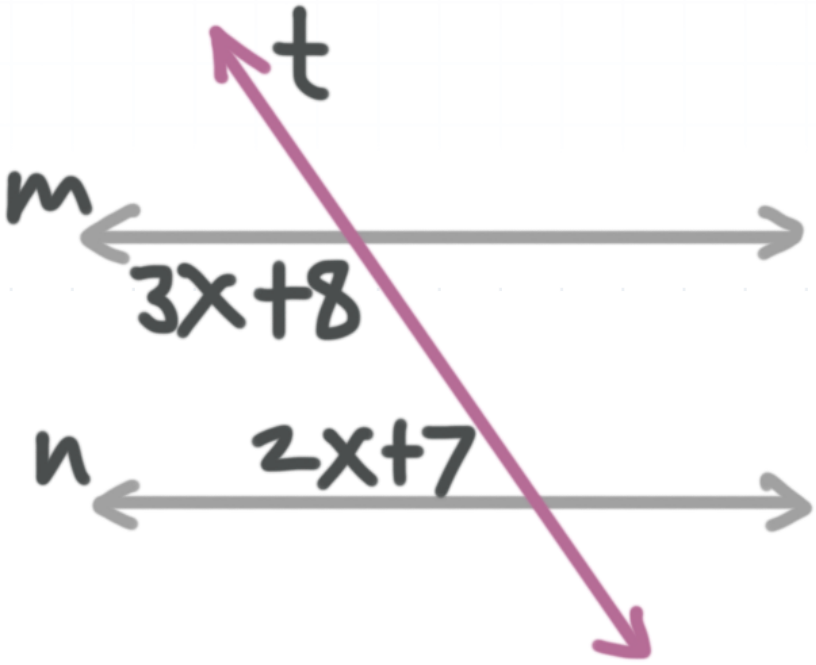
Mark your multiple choice answers on this cover page. For the free response questions, show your work and make sure to circle your final answer.

1. (5 pts)	A	B	C	D	E
2. (5 pts)	A	B	C	D	E
3. (5 pts)	A	B	C	D	E
4. (5 pts)	A	B	C	D	E
5. (5 pts)	A	B	C	D	E
6. (5 pts)	A	B	C	D	E
7. (5 pts)	A	B	C	D	E
8. (5 pts)	A	B	C	D	E

1. **(5 pts)** A regular octagon has all congruent sides and angles. What is the measure of each interior angle?

A	30°	C	90°	E	135°
B	60°	D	120°		

2. **(5 pts)** Solve for x, given $m \parallel n$.

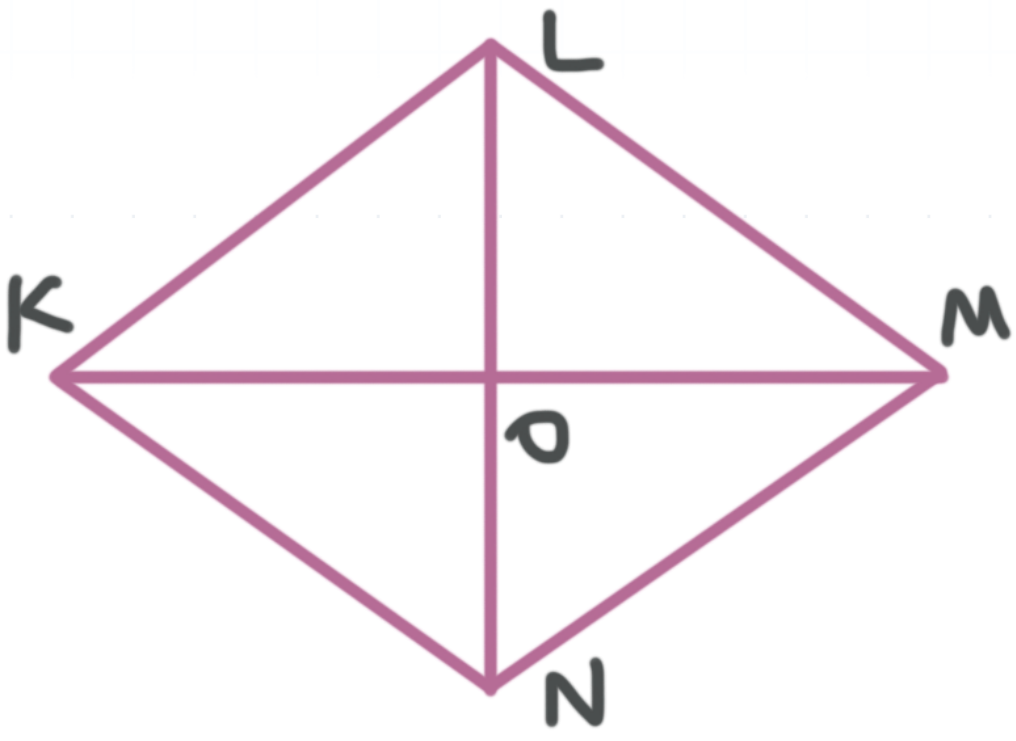


A	15	C	18.5	E	35
B	17	D	33		

3. **(5 pts)** A line segment is drawn on a coordinate plane and has end points $A(1,3)$ and $B(7,7)$. What is the midpoint of $\overline{AB}$?

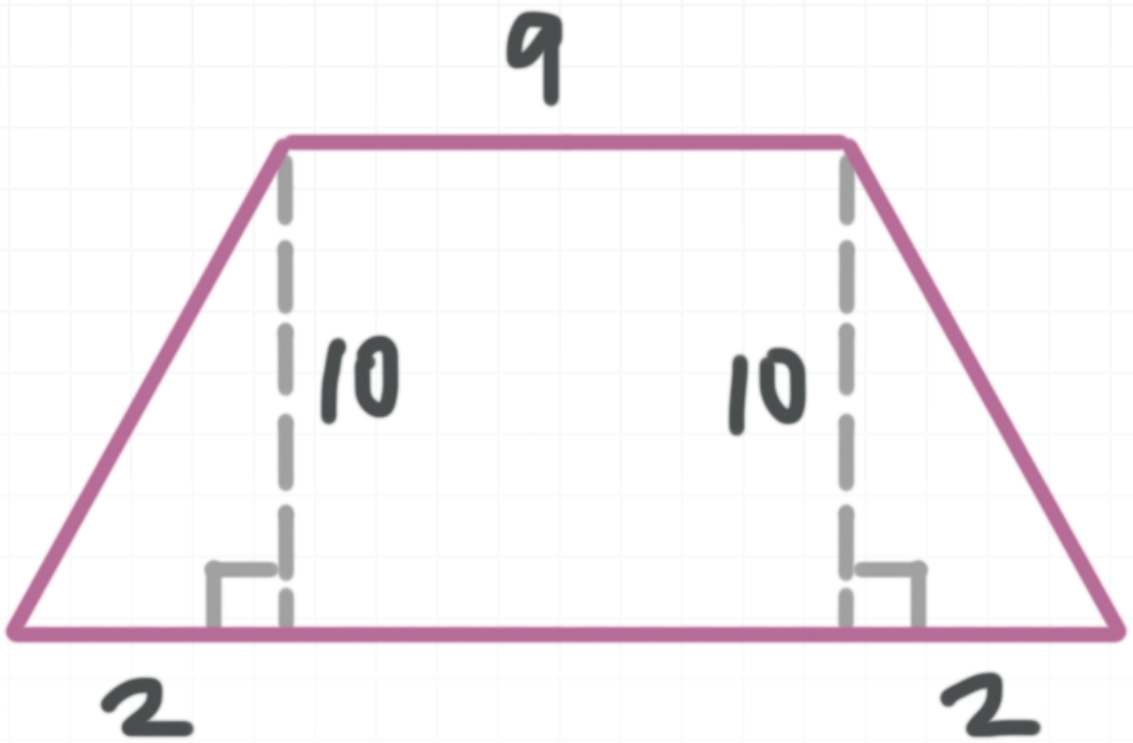
A	$(4,5)$	C	$(4,2)$	E	$(8,10)$
B	$(3,2)$	D	$(3,5)$		

4. **(5 pts)** In rhombus $KLMN$, $\overline{LN} = 10$ and $\overline{OK} = 12$. What is the perimeter of $KLMN$?



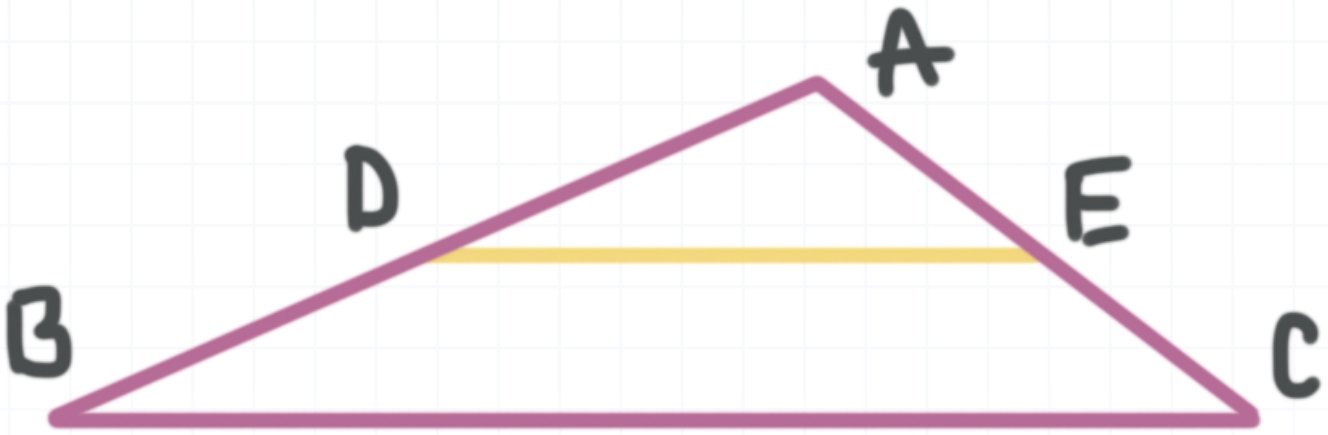
A	13	C	52	E	64
B	26	D	56		

5. **(5 pts)** What is the area of the trapezoid?



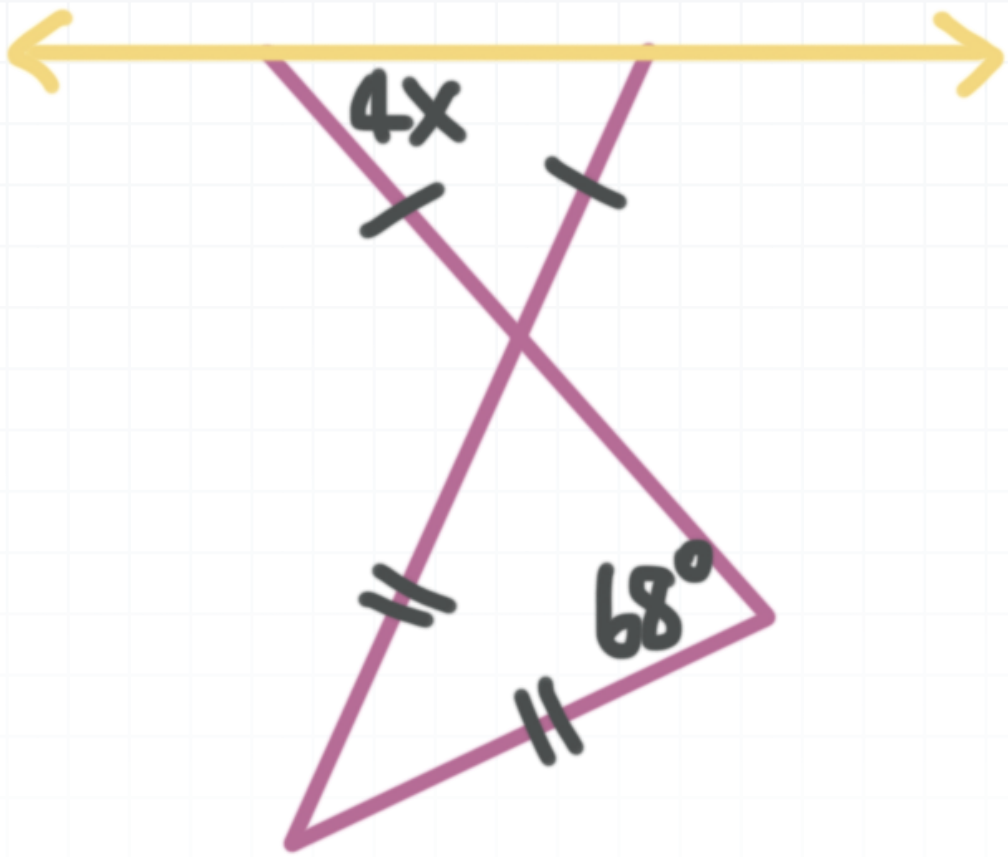
A	42.4	D	220
B	90	E	330
C	110		

6. **(5 pts)** If we know $\overline{AD} = 8$, $\overline{AB} = 2x + 10$, $\overline{AE} = 6$, $\overline{EC} = 15$, and $\overline{DE} \parallel \overline{BC}$, what is the length of $\overline{BD}$?



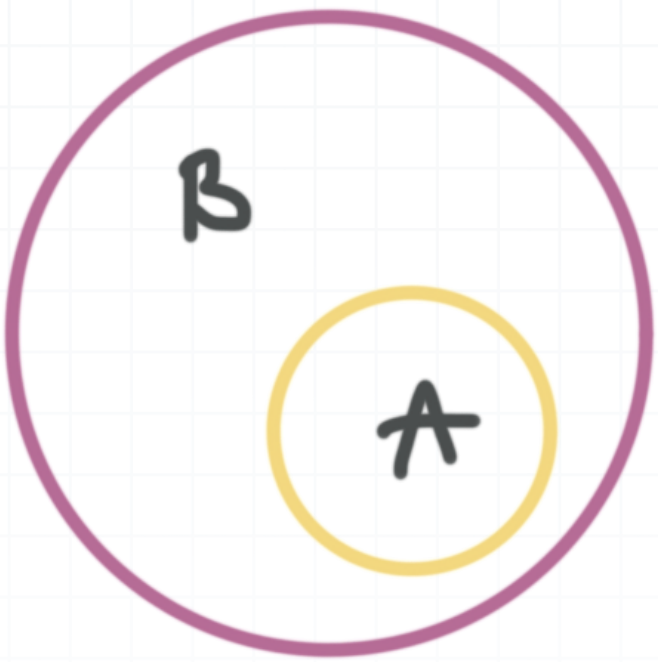
A	$x = 6$	C	$x = 9$	E	$x = 12$
B	$x = 20$	D	$x = 18$		

7. **(5 pts)** Use the figure to solve for the value of x.



A	136°	C	56°	E	14°
B	68°	D	44°		

8. **(5 pts)** If $A =$ iPhone and $B =$ Apple product, which conditional statement best matches the Euler diagram?



A If it's an Apple product, then it's an iPhone

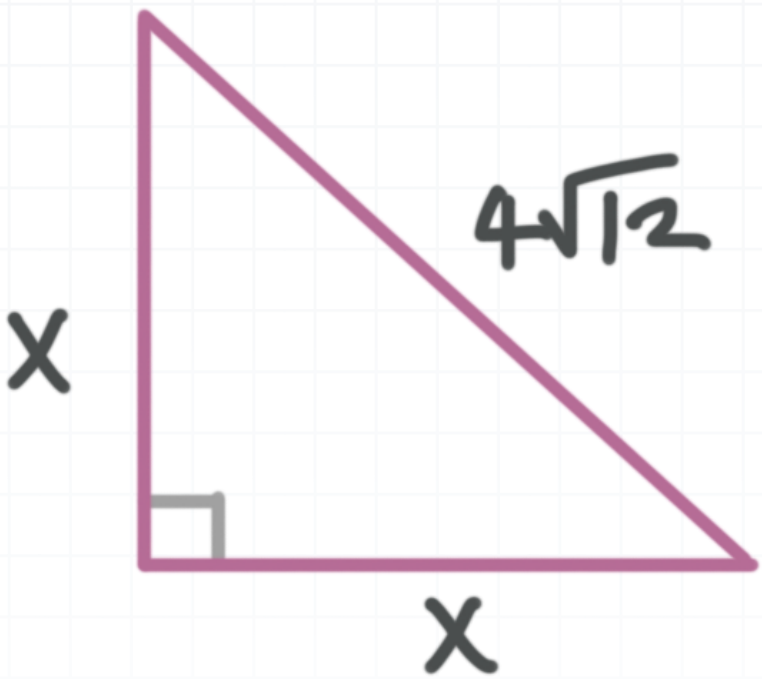
B If it's a product, then it's an Apple iPhone.

C If it's an Apple, then it's an iPhone product.

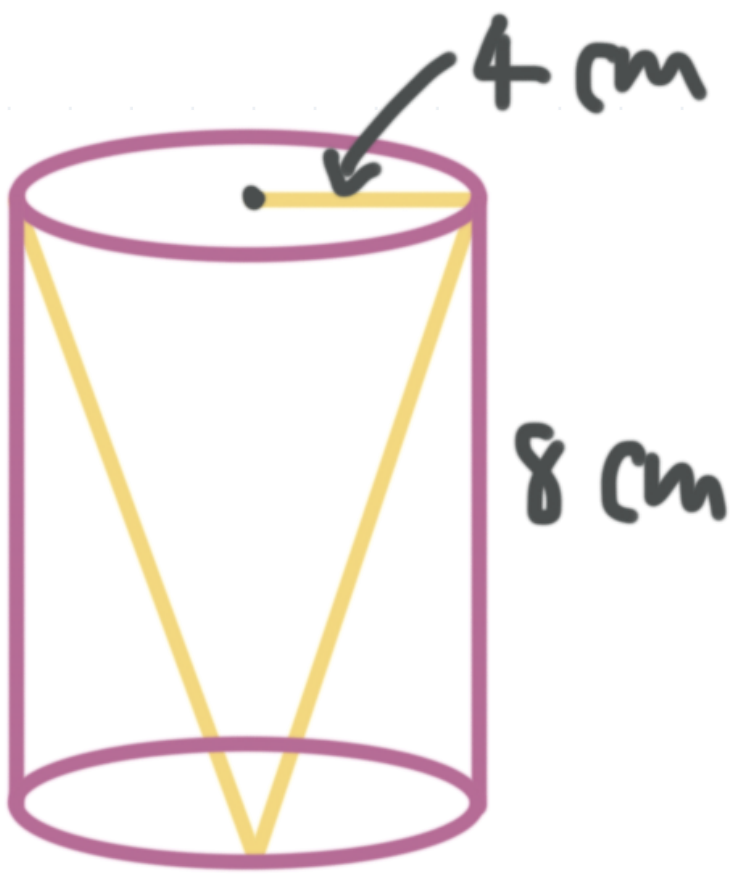
D If it's an iPhone, then it's an Apple product.

E If it's a cell phone, then it's an Apple iPhone.

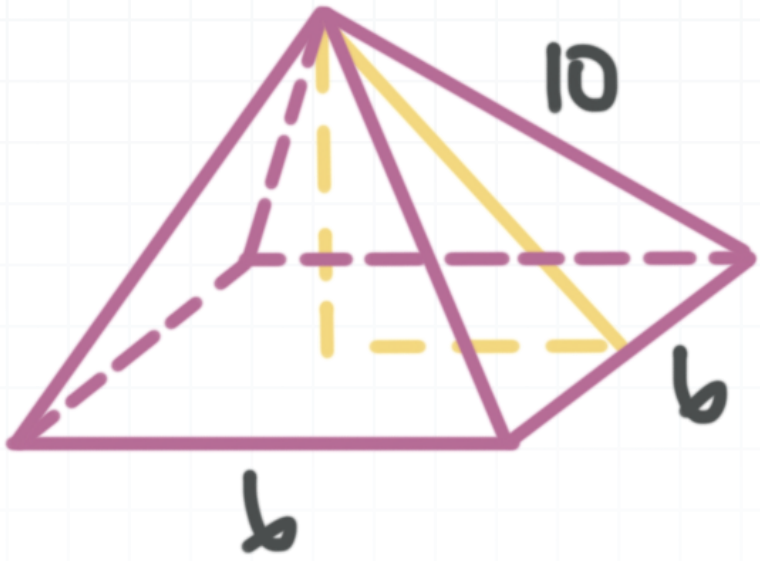
9. **(15 pts)** What is the length of the legs?



10. **(15 pts)** A cone with base radius 4 cm and height 8 cm fits perfectly inside a right circular cylinder with the same dimensions. What is the difference in the volumes of the cylinder and the cone?



11. **(15 pts)** A square pyramid with base 6×6 feet has a slant height of 10 feet. What is the height of the pyramid (the distance from the apex to the center of the base)?



12. **(15 pts)** What are the coordinates of the transformed triangle if $\triangle ABC$ undergoes a counterclockwise rotation by $270°$?