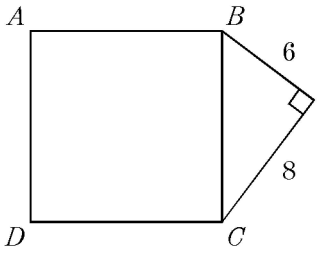
Math 8 Honors 2026

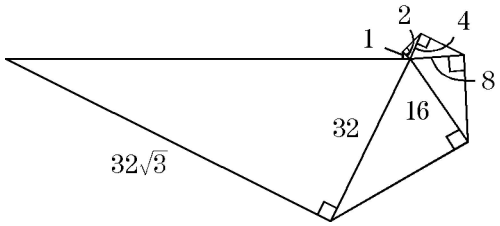
Ch4 Pythag Thm Problems

Name _____ Date _____

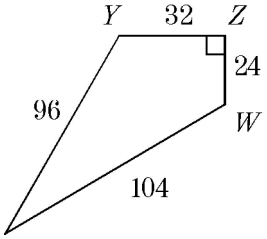
1. What is the number of square units in the area of square $ABCD$?



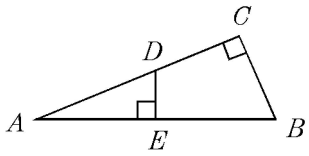
2. Find the perimeter of the polygon shown.



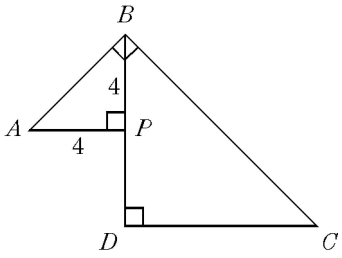
3. What is the area in square units of the quadrilateral $XYZW$ shown?



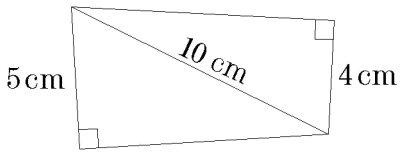
4. In the figure, $AE = 6$, $EB = 7$, and $BC = 5$. What is the area of quadrilateral $EBCD$? Express your answer as a common fraction.



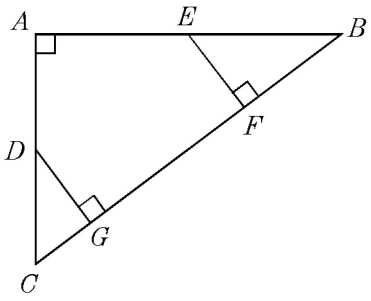
5. P is the midpoint of $\overline{BD}$, $AP = BP = 4$, $\overline{AP} \perp \overline{BD}$, $\overline{BD} \perp \overline{DC}$, $\overline{AB} \perp \overline{BC}$. How many units, expressed in simple radical form, are in the perimeter of pentagon $ABCDP$?



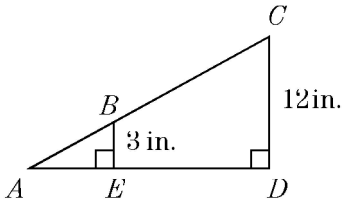
6. What is the number of square centimeters in the area of the quadrilateral? Express your answer rounded to the nearest whole number.



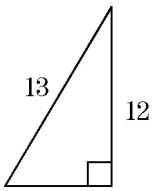
7. In the figure shown, E is the midpoint of $\overline{AB}$, D is the midpoint of $\overline{AC}$, $AB = 16\,\text{cm}$, and $AC = 12\,\text{cm}$. What is the number of square centimeters in the area of pentagon $AEFGD$?



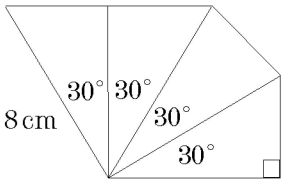
8. Find the number of square inches in the area of $BCDE$ if the length of $\overline{AC}$ is 20 inches.



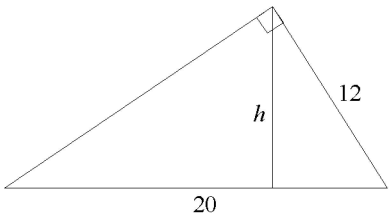
9. What is the area of the right triangle?



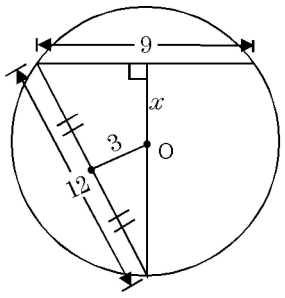
10. Each triangle is a 30-60-90 triangle, and the hypotenuse of one triangle is the longer leg of an adjacent triangle. The hypotenuse of the largest triangle is 8 centimeters. What is the number of centimeters in the length of the longer leg of the smallest triangle? Express your answer as a common fraction.



11. The length of one leg of the largest right triangle is 12 cm, and the length of its hypotenuse is 20 cm. What is the number of centimeters in the length of the altitude h? Express your answer as a decimal to the nearest tenth.



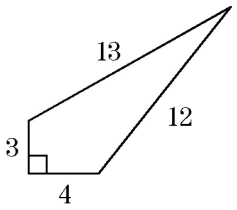
12. Point O is the centre of the circle. Find the value of x.



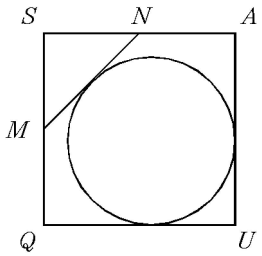
13. Find the length of a chord which is 24 mm from the centre of a circle with diameter 60 mm.

14. An 8 cm chord is 3 cm from the centre of the circle. Find its diameter.

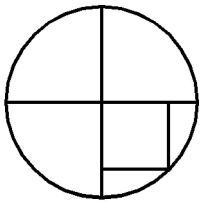
15. If a convex quadrilateral has sides of lengths 3, 4, 12, and 13 and the two shorter sides are perpendicular to one another as shown, what is the area of the quadrilateral?



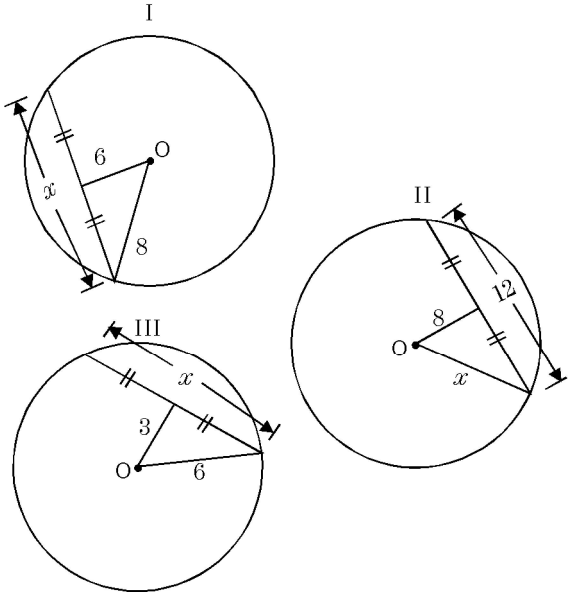
16. Square $SQUA$ with midpoints M and N of sides $\overline{SQ}$ and $\overline{SA}$, respectively, has an area of 64 square units. What is the number of square units, rounded to the nearest integer, in the area of the largest circle which can be drawn in pentagon $MNAUQ$?



17. A square is drawn inside a circle so that one vertex lies at the center of the circle and another vertex lies on the circumference. The area of the circle is 72π square inches. How many square inches are in the area of the square?



18.



O is the centre of each circle. Find x in each of I, II, III respectively.

Math 8 Honors 2026 Ch4 Pythag Thm Problems Mr. Young 1/16/2026

Answer List

1. 100 (units^2)
2. $63\sqrt{3}+63$ (units)
3. 2304 (units^2)
4. $\frac{45}{2}$ (units^2)
5. $12\sqrt{2}+16$ (or $4(3\sqrt{2}+4)$) (units)
6. 40 (square centimeters)
7. 72 (square centimeters)
8. 90 (in^2)
9. 30 (units^2)
10. $\frac{9}{2}$ (centimeters)
11. 9.6 (centimeters)
12. $\frac{3\sqrt{11}}{2}$
13. 36 mm
14. 10 cm
15. 36 (units^2)
16. 39 (square units)
17. 36 (square inches)
18. $4\sqrt{7}$, 10, $6\sqrt{3}$

Catalog List

1. MCC CA 188
2. MCC CA 120
3. MCC CA 137
4. MCC CA 152
5. MCC CA 217
6. MCC CA 269
7. MCC CA 278
8. MCC CE 24
9. MCC CE 2
10. MCC CE 128
11. MCC CE 130
12.
13.
14.
15. MCC CF 47
16. MCC CG 45
17. MCC CA 296
18.