

HONORS GEOMETRY SUMMER ASSIGNMENT

June 2017

As per the Program of Studies:

Summer work assignments will be given in AP and Level 1 courses for the purpose of readiness, relevance and rigor. Assignments will be given to students entering grades 9-12 prior to leaving for the summer recess. Assignments will also be posted on the school's website. Students who choose not to do the summer work and drop the AP or level 1 course must do so by 7/12/2017 to ensure scheduling into an alternate level class. (Notification must be in writing directed to the Guidance Chairperson or by email.)

All summer work is due in the high school main office no later than **FRIDAY, AUGUST 18, 2017**. Parents must contact the school administration prior to the due date if extenuating circumstances prevent a student from meeting the deadline. Late assignments will be penalized 20 points each day they are late beginning the Monday following the due date. **This grade will count for 10% of the first term's overall grade.**

The following summer assignment has 34 problems to be equally weighted for a grade of 100%.

Assignments should be clearly marked with (1) your name (2) my name and (3) titled Advanced Geometry Summer Assignment.

Please **DO NOT** use three-ring binders!

Mail or leave all assignments with the secretaries in the Main Office.

Enjoy your summer and I look forward to seeing you in the fall

Questions?: text me at 401-529-1057

Ms. Nancy Carreiro

ALGEBRA SKILLS : Write all answers in radical form ($\sqrt{\quad}$). No decimals!

Simplify:

1. $\sqrt{180}$

2. $2\sqrt{3} + 6\sqrt{3}$

3. $(4\sqrt{2})(6\sqrt{3})$

4. Rationalize the denominator: $\frac{90}{\sqrt{3}}$

5. $(6\sqrt{27})(5\sqrt{3})$

6. Solve for n:
 $n\sqrt{3} = 15$

7. $\sqrt{72}$

8. $\sqrt{\frac{25}{36}}$

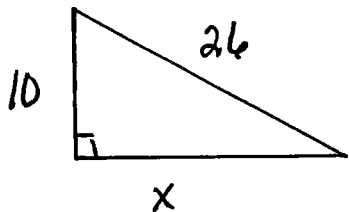
9. $\sqrt{\frac{2}{7}}$

10. $\sqrt{45} + 2\sqrt{20}$

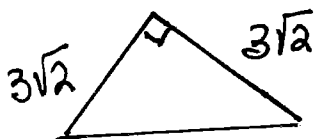
11. $\sqrt{144y^8w^2}$

APPLICATION OF THE PYTHAGOREAN THEOREM

12. Find x



13. Find x

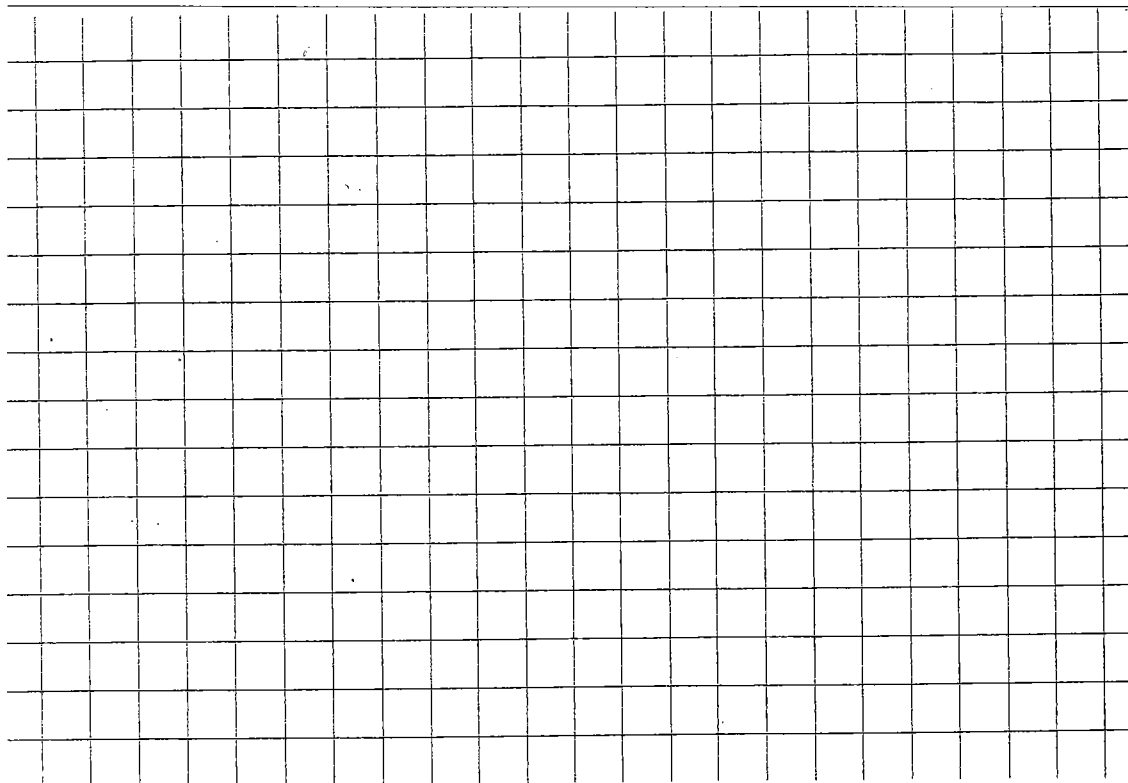


Can the following be the lengths of the sides of a right triangle? Support your answer.

14. 6,8,1

15. 9,40,41

16. Graph the points A $(-2,7)$, B $(-2,0)$, C $(22,0)$. Then compute the distance between points A and C.

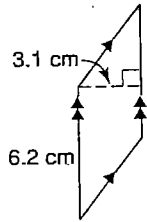


17. Find the distance between the points $(3,8)$ and $(-6,1)$

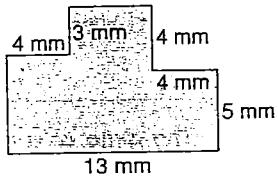
AREA AND VOLUME

Find the area of each figure. Assume the angles that appear to be right angles.

18.

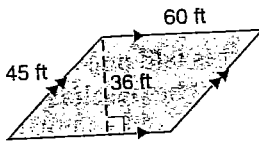


19.

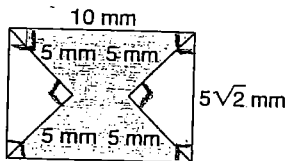


Find the area of the following figures.

20.



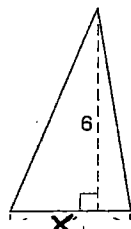
21.



22. When the length of each side of a square is increased by 5 inches, the area of the resulting square is 2.25 times the area of the original square. What is the area of the original square?

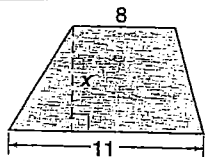
23. Find the value of x , the base of Δ .

$A = 12$

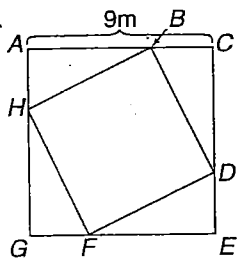


24. Find the value of x

$A = 95$



In the figure, the vertices of the quadrilateral HBDF intersect the square ACEG and divide its sides into segments whose measures have the ratio of 1:2.

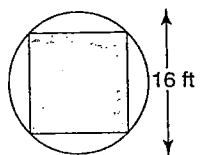


25. Find the area of quadrilateral HBDF

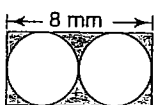
26. What type of figure is HBDF?

27. What is the relationship between the areas of quadrilaterals HBDF and square ACEG?

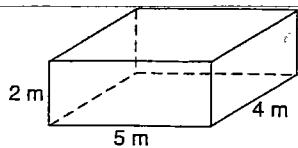
28. Find the area of the square.



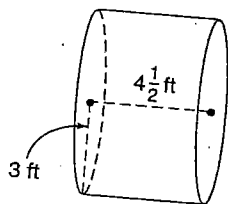
29. Find the area of the shaded region of the following rectangle.



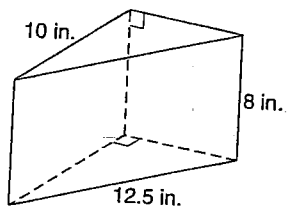
30. Find the *volume* of the rectangular prism.



31. Find the *volume* of the cylinder.

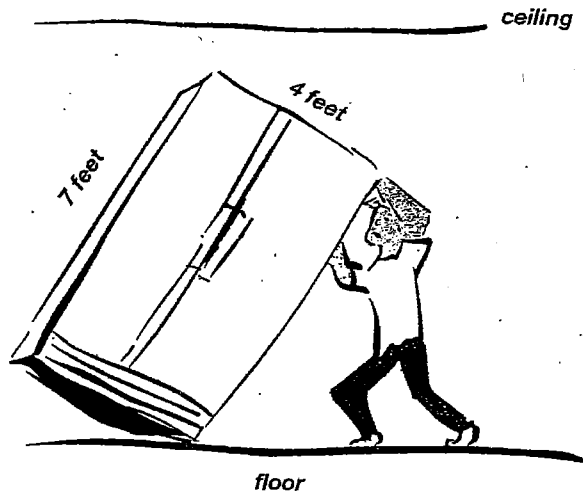


32. Find the *volume* of the triangular prism.



WORD PROBLEMS

33. The THS new industrial-sized refrigerator is lying on its side. Josh wants to tilt it upright, but is worried that it might hit the ceiling which is 8 feet high. Will the refrigerator hit the ceiling while Josh is tilting it upright? Show your calculations that you use to justify your answer.



34. If the sphere of ice cream melts, is the cone large enough to hold the melted ice cream? Explain.

