NAME: Key

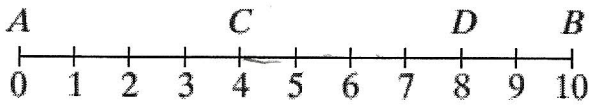
GEOMETRY

SEMESTER 2 FINAL EXAM REVIEW PART 3

28. The ratio of the lengths of two equilateral triangles is 3:7. What is the ratio of their areas? 11.5

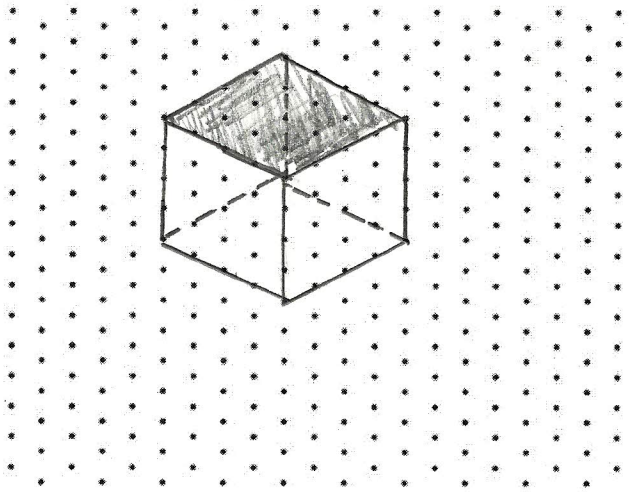
$\left(\frac{3}{7}\right)^2 = \frac{9}{49}$

29. A point on $\overline{AB}$ is selected at random. What is the probability that it is a point on $\overline{CD}$?

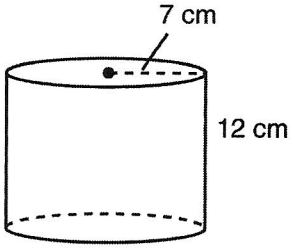


$\frac{4}{10} = \frac{2}{5}$

30. Draw a square prism with dimensions 4 x 4 x 4.



31. Find the surface area of the right cylinder below.



$SA = 2\pi rh + 2\pi r^2$

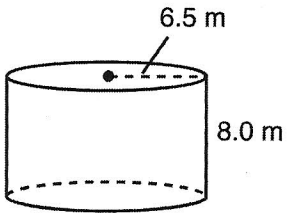
$= 2(3.14)(7)(12) + 2(3.14)(7^2)$

$= 527.52 + 307.72$

$SA = 835.24\ cm^2$

34. Find the volume of the right cylinder.

12.4



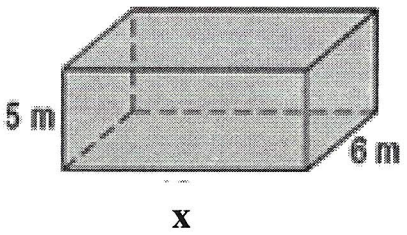
$V = \pi r^2 h$

$= 3.14(6.5)^2(8)$

$V = 1061.32\ m^3$

35. Find the value of x if the right prism has a volume of 360 m^3.

12.4



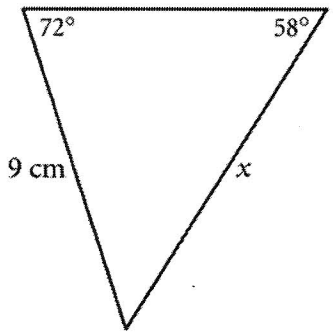
$5(6)(x) = 360$

$\frac{30x}{30} = \frac{360}{30}$

$x = 12m$

41. Use the Law of Sines to solve the triangle for x.

8.6



$\frac{\sin 72}{x} = \frac{\sin 58}{9}$

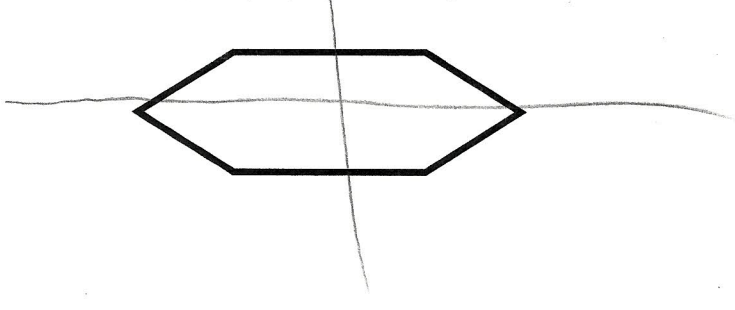
$9\sin 72^\circ = x \sin 58^\circ$

$x = \frac{9\sin 72^\circ}{\sin 58^\circ}$ $\quad x = \frac{8.5595}{.8480} = 10.1cm$

42. What is the geometric mean of 12 and 3?

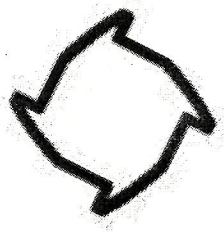
8.1 $\sqrt{12 \cdot 3} = \sqrt{36} = 6$

43. How many lines of symmetry does the figure below have? Draw them in.



44. Does the figure below have rotational symmetry? If so, what is the magnitude?

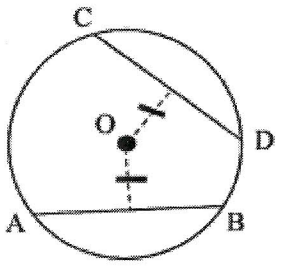
9.5



yes

90°

45. Given the diagram below, if the measure of CD is 42, what is the measure of AB?



$\overline{AB} = 42$

46. Find the surface area of the triangular prism where the base is a right triangle with legs measuring 5 and 12 and the prism has a height of 10.

$SA = LA + 2B$

$LA = Ph$ $LA = 30(10)$

$P = 5+12+13$ $= 300$

$= 30$

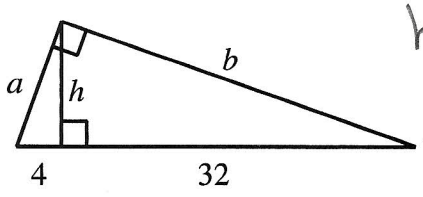
$B = \frac{1}{2}(12)(5)$ $2B = 60$

$SA = 300 + 60$

$SA = 360$

47. Find *a*, *b*, and *h*.

8.1

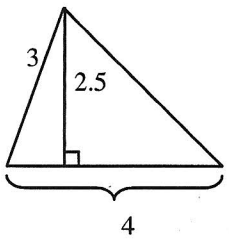


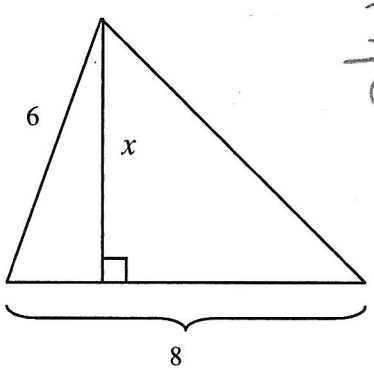
$h = \sqrt{4 \cdot 32}$ $a = \sqrt{4(36)}$ $b = \sqrt{32(36)}$

$= \sqrt{128}$ $a = \sqrt{144}$ $b = \sqrt{1152}$

$h = 11.31$ $a = 12$ $b = 33.9$

48. Find the value of x in the figure below.





$\frac{3}{6} = \frac{2.5}{x}$

$\frac{3x}{3} = \frac{15}{3}$

$x = 5$