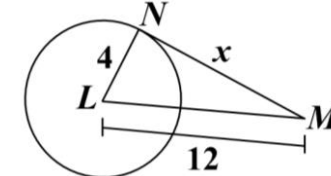|		
1a. Determine the length of side *DE* on the parallelogram. $6x + 48$ $9x - 3$ (parallelogram *EFGD*)	1b. Determine $m\angle C$. $(8x + 63)°$ $(5x)°$	1c. Determine $m\angle S$. $(5x + 5)°$ $(3x + 39)°$
2a. Determine $m\angle L$. $(2x + 13)°$ $(4x + 23)°$	2b. Determine the length of side *KL* on the parallelogram. $10x + 8$ $4x + 44$	2c. Determine the length of side *QR* on the parallelogram. $7x - 13$ $2x + 47$
3a. Determine the value of *x*. $x°$ $108°$	3b. Determine the value of *x*. $70°$ $x°$	3c. Determine the value of *x*. $3x°$ $30°$
4a. Determine the value of *x*. $x°$ $64°$	4b. Determine the value of *x*. $x°$ $40°$	4c. Determine the value of *x*. $100°$ $2x°$
5a. Determine the value of *x*, given that $\overline{EF}$ is tangent to $\odot D$ at *E*. 15 9 x	5b. Determine the value of *x*, given that $\overline{GH}$ is tangent to $\odot K$ at *G*. 17 x 8	5c. Determine the value of *x*, given that $\overline{MN}$ is tangent to $\odot L$ at *N*. 4 x 12
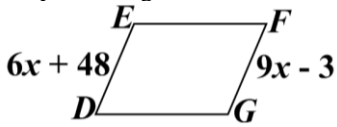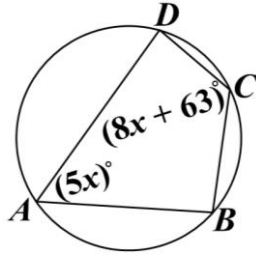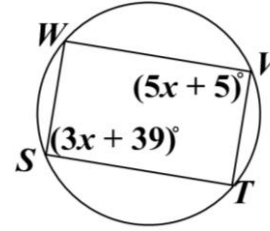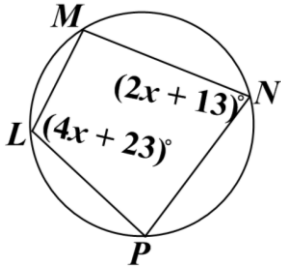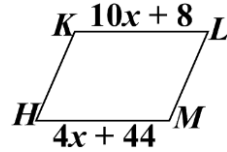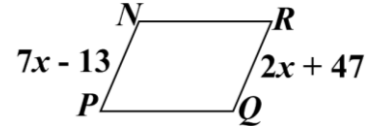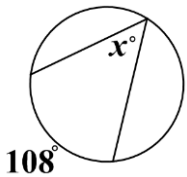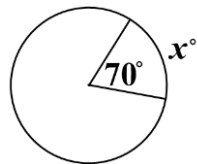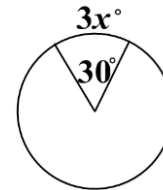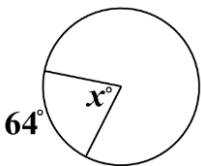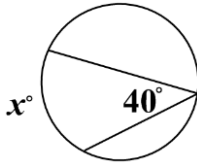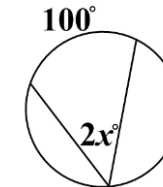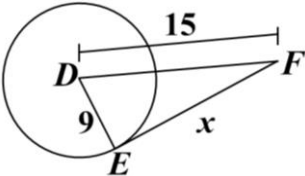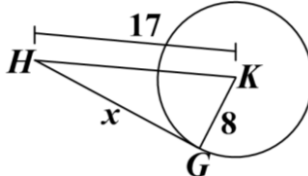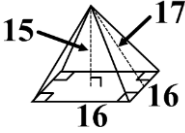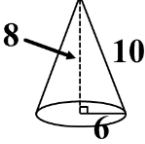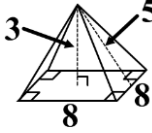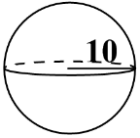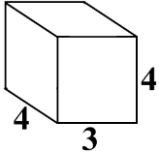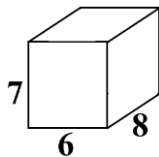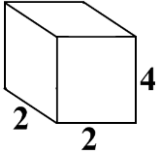
6a. Determine the volume of the square pyramid.	6b. Determine the volume of the cone. Leave your answer in terms of pi.	6c. Determine the volume of the square pyramid.
15 ⟋ 17 ⟋ 16, 16 (base)	8 ⟍ 10, 6	3 ⟋ 5, 8, 8 (base)

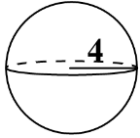| 7a. A cube (square prism) has a volume of 50 cm^3. Determine the base length if the height of the cube is 2 cm.	7b. A cylinder has a volume of 245π in. Determine the length of the radius, if the height of the cylinder is 5 in.	7c. A cylinder has a volume of 72π cm. Determine the length of the radius, if the height of the cylinder is 8 cm.

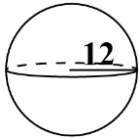| 8a. Determine the volume of a cone that has a radius of 3 cm, a height of 4 cm and a slant height of 5 cm. Write your answer in terms of pi.	8b. Determine the volume of a cone that has a radius of 7 in, a height of 24 in and a slant height of 25 in. Write your answer in terms of pi.	8c. Determine the volume of a square pyramid that has a base length of 18 cm, a height of 12 cm and a slant height of 15 cm. Write your answer in terms of pi.

9a. Determine the volume of the given sphere in terms of pi.	9b. Determine the volume of the given sphere in terms of pi.	9c. Determine the volume of the given sphere in terms of pi.
4	10	12

10a. If the figure below were dilated by a scale factor of $k = 2$, what would be the volume of the dilated figure?	10b. If the figure below were dilated by a scale factor of $k = 4$, what would be the volume of the dilated figure?	10c. If the figure below were dilated by a scale factor of $k = 3$, what would be the volume of the dilated figure?
4, 4, 3	7, 6, 8	4, 2, 2

Volume Formulas:

Prism $V = BH$	Cylinder $V = \pi r^2 H$	Pyramid $V = \dfrac{BH}{3}$	Cone $V = \dfrac{\pi r^2 H}{3}$	Sphere $V = \dfrac{4\pi r^3}{3}$

Unit 6 Study Guide Answers

1a. $DE = 150$	1b. $m\angle C = 135°$	1c. $m\angle S = 90°$	2a. $m\angle L = 119°$	2b. $KL = 68$	2c. $QR = 71$
3a. $x = 54°$	3b. $x = 70°$	3c. $x = 10°$	4a. $x = 64°$	4b. $x = 80°$	4c. $x = 25°$
5a. $x = 12$	5b. $x = 15$	5c. $x = 8\sqrt{2}$	6a. $V = 1280$	6b. $V = 96\pi$	6c. $V = 64$
7a. $b = 5\ cm$	7b. $r = 7\ in$	7c. $r = 3\ cm$	8a. $V = 12\pi\ cm^3$	8b. $V = 392\pi\ in^3$	8c. $V = 1296\pi\ cm^3$
9a. $V = 85.3\pi$ or $V = \dfrac{256}{3}\pi$	9b. $V = 1333.3\pi$ or $V = \dfrac{4000}{3}\pi$	9c. $V = 2304\pi$	10a. $V = 384$	10b. $V = 21504$	10c. $V = 432$