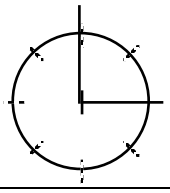
Chapter 1, Essential Geometry

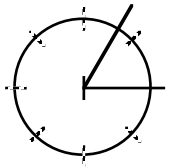
ODD Focus Exercise Answers

Section 1.1 Basic Definitions of Geometry

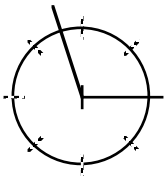
1. 90°



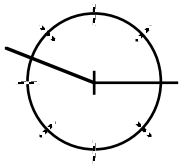
3. 60°



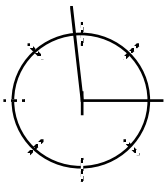
5. 108°



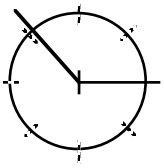
7. 160°



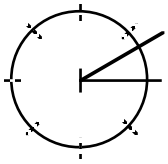
9. 96°



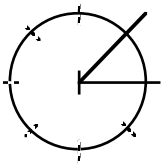
11. 132°



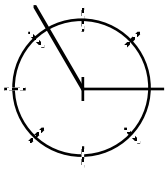
13. $\frac{1}{12}$



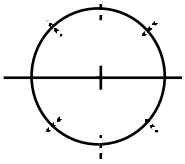
15. $\frac{1}{8}$



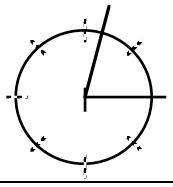
17. $\frac{1}{3}$



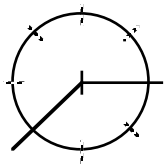
19. $\frac{1}{2}$



21. $\frac{5}{24}$



23. $\frac{5}{8}$



25. 57° 53’ 55”

27. 153° 07’ 53”

29. 90°

31. 33° 15’ 13”

33. 11° 42’ 54”

35. 60° 45’ 28”

Section 1.2 Angles and Angle Measure

1a) Corresponding angles; congruent
b) Alternate interior angles; congruent
c) Vertical angles; congruent
d) Adjacent angles; not congruent
e) Corresponding angles; congruent
f) Alternate interior angles; congruent
g) Alternate exterior angles; congruent

3a) $m\angle XYZ = 30°$
b) $m\angle XYZ = 54.2°$
c) $m\angle XYZ = 56° 13’$
d) $m\angle XYZ = 7° 44’ 24”$

5a) $m\angle ABD = 28°$
b) $m\angle XYW = 74°$
c) $m\angle ABD = 30.95°$
d) $m\angle XYW = 66.6°$
e) $m\angle ABD = 24° 16’ 09”$
f) $m\angle XYW = 78° 03’ 21”$
g) $m\angle ABD = 18° 55’ 31”$
h) $m\angle XYW = 74° 38’ 55”$

Section 1.3 Triangles

1. Yes **3.** No **5.** Yes **7.** $m\angle C = 69°$; acute triangle

9. $m\angle C = 48°\ 52'$; obtuse triangle

11:
a) No. (Answers may vary. One answer is: There are no 90° angles in an equilateral triangle.)
b) Yes. **c)** Yes. **d)** No. An oblique triangle has no right angle.

13. $m\angle y = 48°; m\angle z = 84°$ **15.** $m\angle x = 73°; m\angle y = 73°$

17. $m\angle y = 53°\ 37'\ 49''; m\angle z = 72°\ 44'\ 22''$ **19.** *a, c, b* **21.** *F, H, G*

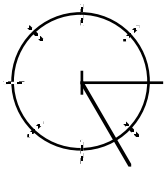
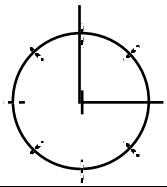
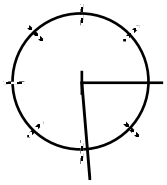
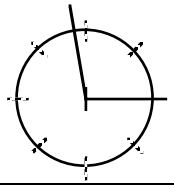
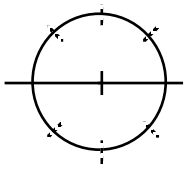
23. $c = 2\sqrt{13}$ **25.** $c = 3\sqrt{2}$ **27.** $a = 5$ **29.** $c = 3\sqrt{3}$

31. $a = 3, b = 4, c = 5$ **33.** $a = 21, b = 20, c = 29$

Section 1.4 Circles

1. $s = \frac{8\pi}{9}$ **3.** $s = 2\pi$ **5.** $s = \frac{\pi}{6}$ **7.** $\theta = 45°$

9. $\theta = 90°$ **11.** $\theta = 90°$

13. 300° 	**15.** 90° 	**17.** 275° 
19. -260° 	**21.** -180° 	**23.** -230°