

Texas Geometry
Topic 10 - Review Answers

1. Trigonometric ratios

2. angle of elevation

3. Pythagorean triple

4. $x = 2\sqrt{113}$

5. $x = 17$

6. $x = 12\sqrt{2}$

7. $x = 9\sqrt{3}$

8. $x = 7, y = 7\sqrt{2}$

9. $x = 5\sqrt{2}$

10. $y = 12, x = 6\sqrt{3}$

11. $x = 7, y = 7\sqrt{3}$

12. $d = 70.7$ ft.

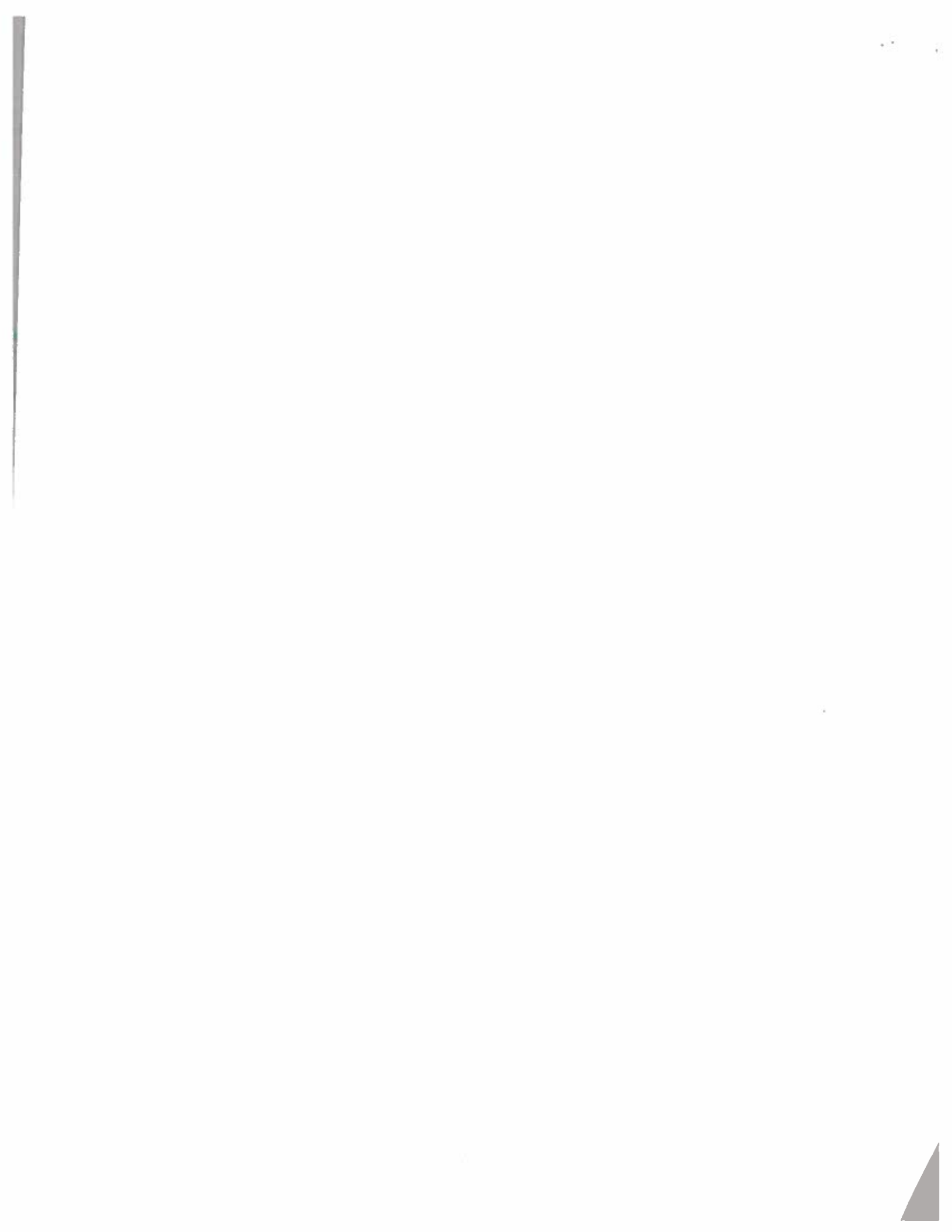
13. $\sin A = \frac{\sqrt{19}}{10}, \cos A = \frac{9}{10}, \tan A = \frac{\sqrt{19}}{9}$

14. $\sin A = \frac{4}{5}, \cos A = \frac{3}{5}, \tan A = \frac{4}{3}$

15. $x = 16.5$

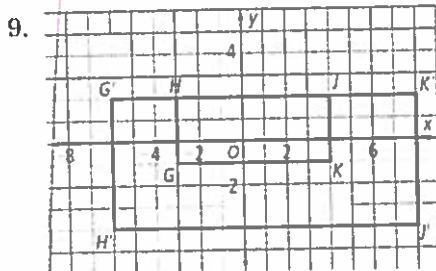
16. $x = 33.1$

17. $h = 38.2$ ft



Texas Geometry
Topic 9 - Review Answers

1. similar
2. proportion
3. scale factor
4. means, extremes (in either order)
5. $JEHN \sim JKLP$; 3 : 4
6. $\triangle PQR \sim \triangle XYZ$; 3 : 2
7. $3\frac{1}{2}$ ft tall by $5\frac{1}{4}$ ft wide
8. $x = 63, y = 8$



10. No. The side lengths are not proportional.
11. No, because all of the dimensions of the airplane must dilate by the same scale factor for the figures to be similar.
12. Answers may vary. Sample answer:
The figures are similar because a composition of a translation, rotation, and a dilation maps p to d .
13. 120 ft
14. 45 ft

15. The ratio of each corresponding side is 2 : 1, so $\triangle AMY \sim \triangle ECD$ by SSS~.

16. If the lines are \parallel , then corresponding angles are \cong . Therefore $\triangle RPT \sim \triangle SGT$ by AA~.

17. 12

18. $2\sqrt{15}$

19. $x = 6\sqrt{2}, y = 6\sqrt{6}$

20. $\sqrt{35}$

21. $x = 2\sqrt{21}, y = 4\sqrt{3}$

22. $x = 12, y = 4\sqrt{5}$

23. 7.5

24. 3.6

25. 22.5

26. 12

27. 17.5

28. 77

Texas Geometry
Topic 6 - Review Answers

1. rhombus
2. equiangular polygon
3. consecutive angles
4. trapezoid
5. 120, 60
6. 157.5, 22.5
7. 108, 72
8. 360, 360, 360
9. 159
10. 69
11. $m\angle 1 = 38$, $m\angle 2 = 43$, $m\angle 3 = 99$
12. $m\angle 1 = 101$, $m\angle 2 = 79$, $m\angle 3 = 101$
13. $m\angle 1 = 37$, $m\angle 2 = 26$, $m\angle 3 = 26$
14. $m\angle 1 = 45$, $m\angle 2 = 45$, $m\angle 3 = 45$
15. $x = 3$, $y = 7$.
16. $x = 2$, $y = 5$.
17. no
18. yes
19. $x = 29$, $y = 28$
20. $x = 4$, $y = 5$.

21. $m\angle 1 = 58, m\angle 2 = 32, m\angle 3 = 90$
22. $m\angle 1 = 124, m\angle 2 = 29, m\angle 3 = 62$
23. sometimes
24. always
25. sometimes
26. sometimes
27. sometimes
28. always
29. No; two sides are parallel in all \square .
30. Yes; the \square is a rhombus and a rectangle so it must be a square.
31. $x = 18$; a diagonal bisects a pair of $\angle s$ in a rhombus.
32. $x = 4$; a rectangle has \cong diagonals that bisect each other.
33. $m\angle 1 = 135, m\angle 2 = 135, m\angle 3 = 45$
34. $m\angle 1 = 80, m\angle 2 = 100, m\angle 3 = 100$
35. $m\angle 1 = 90, m\angle 2 = 25$
36. $m\angle 1 = 56, m\angle 2 = 52$.
37. 2

Texas Geometry
Topic 13 - Review Answers

1. . composite figure

2. apothem

3. radius

4. height

5. 10 m^2

6. 90 in.^2

7. 30 ft^2

8. 160 ft^2

9. 30 ft^2

10. $96\sqrt{3} \text{ mm}^2$

11. 96 ft^2

12. 117 cm^2

13. 256 ft^2

14. 54 m^2

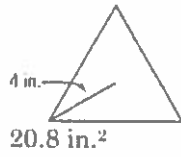
15. $9\sqrt{3} \text{ in.}^2$

16. 28 m^2

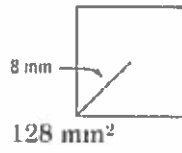
17. 28 m^2 $2400\sqrt{3}$

18. 112.5 m^2

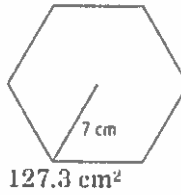
19.



20.



21.



22. 4 : 9

23. 9 : 4

24. 1 : 4

25. 4 : 1

26. $2\sqrt{2} : 5$

27. 73.5 ft²

28. 232.5 cm²

29. 124.7 in.²

30. 8 m²

31. 331.4 ft²

32. 24.6 ft²

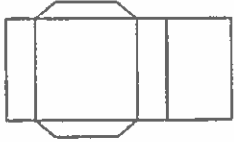
33. 100.8 cm²

34. 70.4 m²

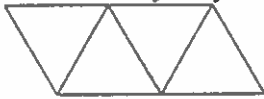
Texas Geometry
Topic 14 - Review Answers

1. sphere
2. pyramid
3. cross section

4. Answers may vary. Samples are given:

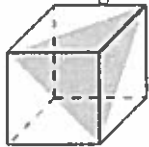


5. Answers may vary. Samples are given:



6. 8
7. 8
8. 5
9. The cross section is a circle.

10. Drawings may vary. Sample:



11. 36 cm^2
12. $66\pi \text{ m}^2$
13. 208 in.^2
14. $36\pi \text{ cm}^2$
15. $32.5\pi \text{ cm}^2$

16. $B = \frac{\text{S.A.} - \text{L.A.}}{2}$

17. about 185.6 ft²

18. 576 m²

19. about 50.3 in.²

20. about 391.6 in.²

21. 84 m³

22. $V = \pi r^2 h$
 $= \pi \left(\frac{2.5 \text{ ft}}{2} \right)^2 (5 \text{ ft})$
 $= 24.5 \text{ ft}^3$

23. 410.5 yd³

24. 13.9 m³

25. S.A. = 314.2 in.²; V = 523.6 in.³

26. S.A. = 153.9 cm²; V = 179.6 cm³

27. S.A. = 50.3 ft²; V = 33.5 ft³

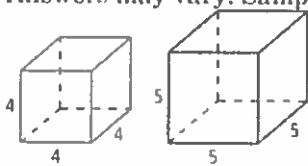
28. S.A. = 8.0 ft²; V = 2.1 ft³

29. 904.78 cm³

30. 314 m²

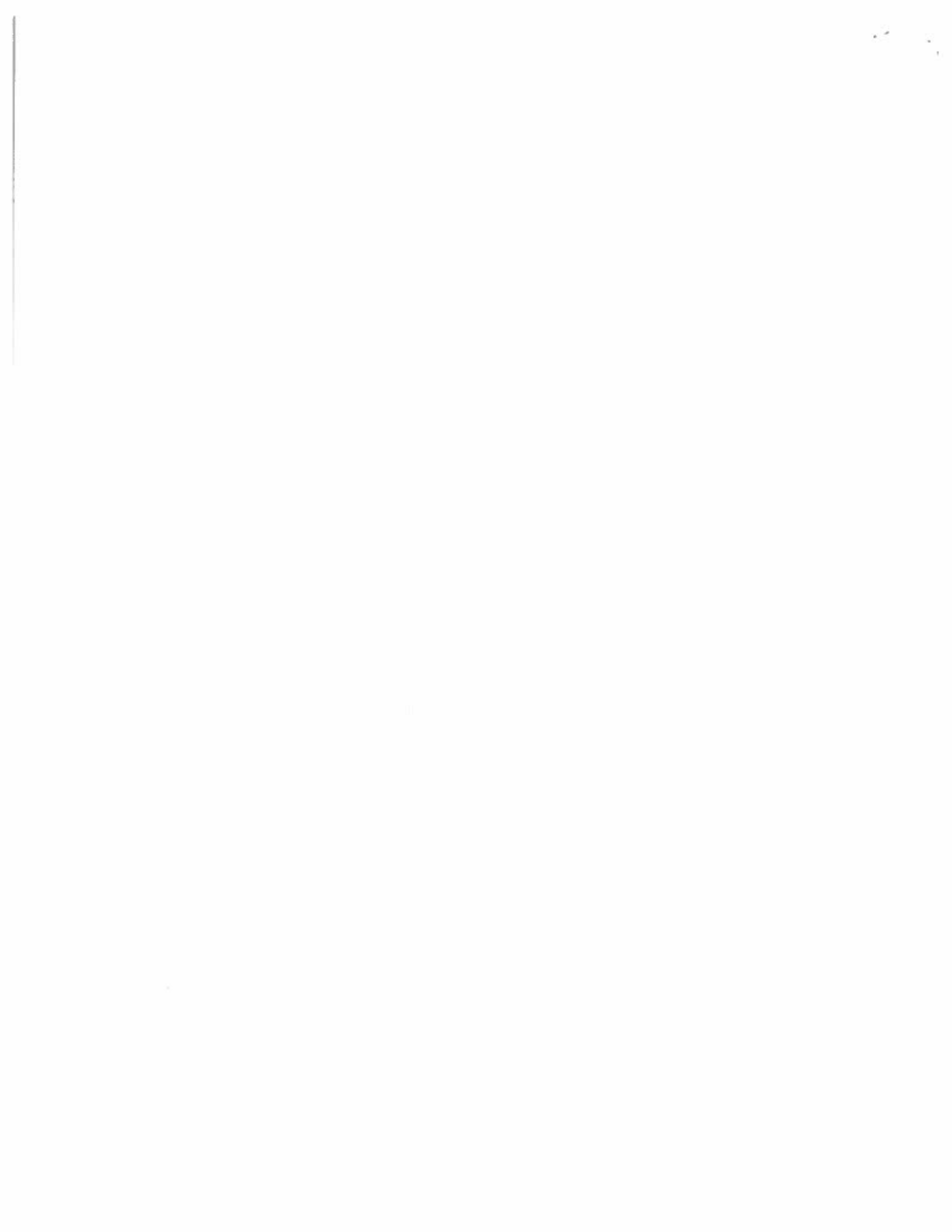
31. 8.6 in.³

32. Answers may vary. Sample:



33. 27:64

34. 64:27



Texas Geometry
Topic 11 - Review Answers

1. sector

2. radian

3. concentric circles

4. 30

5. 120

6. 330

7. 120

8. $\frac{22}{9}\pi$ in.

#9 ~~$9. \frac{22}{9}\pi$ in.~~ π mm

#10 ~~$10. \pi$ mm~~ $\frac{25}{9}\pi$ m

11. 4π m

12. $\frac{2\pi}{3}$ Rad

13. $\frac{\pi}{2}$ Rad

14. $\frac{\pi}{4}$ Rad

15. $\frac{18}{11}$ Rad

19. 144π in.²

20. $\frac{49}{4}\pi$ ft²

21. 41.0 cm²

22. ~~41.0 cm²~~ 18.3 cm²

23. 36.2 cm²

24. $x^2 + (y+2)^2 = 9$

25. $(x-3)^2 + (y-2)^2 = 4$

26. $(x+3)^2 + (y+4)^2 = 25$

27. $(x-1)^2 + (y-4)^2 = 9$

28. center: $(7, -5)$; radius: 6

Texas Geometry
Topic 12 - Review Answers

1. secant of
2. chord
3. tangents to
4. inscribed angle
5. 20
6. $\sqrt{3}$
7. 120
8. 90
9. 2 : 1.

10. ~~4.5~~ AB is a Diameter

11. ~~y = 6.7~~ 11. ~~4.5~~ 12. $y = 6.7$

13. ~~12.~~ $a = 80, b = 40, c = 40, d = 100$

14. ~~13.~~ $a = 40, b = 140, c = 90$

15. ~~14.~~ $a = 118, b = 49, c = 144, d = 98$

16. ~~15.~~ $a = 90, b = 90, c = 70, d = 65$

17. ~~16.~~ 37

18. ~~17.~~ $a = 95, b = 85$

19. ~~18.~~ 6.5

20. ~~19.~~ 4

$$20. (5)8 = 10x$$

$$40 = 10x$$

$$x = \frac{40}{10} = 4$$