

TEST 1, FORM A

1.  $m = 99; n = 99; p = 27$
2.  $a = 25; b = 16; c = 50$
3.  $53^\circ$
4. 97.68 m
5.  $33.49 \text{ in.}^2$
6.  $50.47 \text{ cm}^3$
7.  $22 \text{ ft}^2$
8.  $55.74 \text{ cm}^2$
9. 30 in.
10.  $p = 47; q = 86$
11.  $\frac{21}{4}$
12.  $3052.08 \text{ in.}^3; 1017.36 \text{ in.}^2$
13.  $xy^{10}$
14.  $x^{-6}y^{-3}z^{-7}$
15.  $w^{-3}x^3y^2z^{-1}$
16.  $-\frac{1}{64}$
17. -27
18. -22
19. -26
20. 44

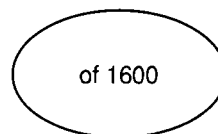
TEST 2, FORM A

1.  $y = \frac{145}{8}; A = 20; B = 24$
2.  $202.43 \text{ in.}^3$
3.  $x = 55; y = 55; P = 125; R = 27.5; Q = 27.5$
4.  $\sqrt{86} \text{ ft}$
5. -51
6.  $\frac{1}{648}$
7.  $2ab^{-1} + 4ay^{-1} - 7x^{-1}y^3$
8.  $5xy - 3x$
9.  $x^{-5}b^{-7}$
10.  $3m^4$
11. -12
12.  $25\frac{7}{8}$
13. -35
14. 637.5
15.  $1\frac{3}{20}$
16.  $\frac{11}{6}$

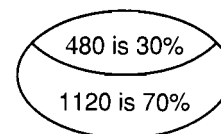
17.  $3a^2 - 2m^{-3}$
18.  $135^\circ$
19. 7, 9, 11
20. 4302

TEST 3, FORM A

1. 1600

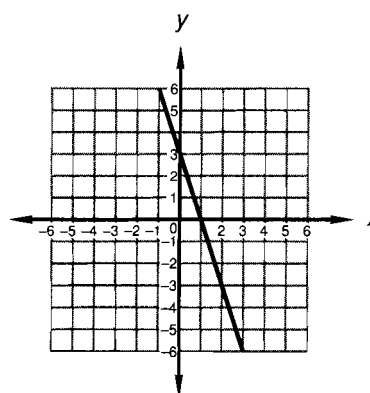


Before, 100%



After

2. \$100,000
3. 14, 16, 18
4. 600
5.  $a = 30; b = 75; c = 40$
6. 33
7.  $a = \frac{21}{4}; R = 106; T = 74$
8.  $\sqrt{161}$
9.  $\frac{14}{27}$
10.  $-\frac{6}{11}$
11.  $2c^6 - 3c^4p^{-1}$
12.  $2 - 2y^4$
13. 31.4 m
- 14.



15.  $\frac{1}{4}$
16.  $-\frac{71}{72}$
17.  $\frac{cx^6}{8a^5}$
18. -16
19. -19
20.  $\frac{2m^3x}{a} - \frac{3m^3x^2}{a^2}$

# *Algebra 2*

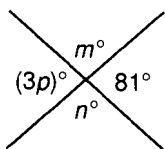
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## *Testing Schedule*

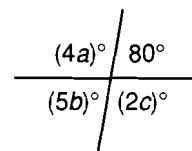
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<b>Test to be administered:</b>	<b>Covers material up through:</b>	<b>Give after teaching:</b>
Test 1	Lesson 2	Lesson 6
Test 2	Lesson 6	Lesson 10
Test 3	Lesson 10	Lesson 14
Test 4	Lesson 14	Lesson 18
Test 5	Lesson 18	Lesson 22
Test 6	Lesson 22	Lesson 26
Test 7	Lesson 26	Lesson 30
Test 8	Lesson 30	Lesson 34
Test 9	Lesson 34	Lesson 38
Test 10	Lesson 38	Lesson 42
Test 11	Lesson 42	Lesson 46
Test 12	Lesson 46	Lesson 50
Test 13	Lesson 50	Lesson 54
Test 14	Lesson 54	Lesson 58
Test 15	Lesson 58	Lesson 62
Test 16	Lesson 62	Lesson 66
Test 17	Lesson 66	Lesson 70
Test 18	Lesson 70	Lesson 74
Test 19	Lesson 74	Lesson 78
Test 20	Lesson 78	Lesson 82
Test 21	Lesson 82	Lesson 86
Test 22	Lesson 86	Lesson 90
Test 23	Lesson 90	Lesson 94
Test 24	Lesson 94	Lesson 98
Test 25	Lesson 98	Lesson 102
Test 26	Lesson 102	Lesson 106
Test 27	Lesson 106	Lesson 110
Test 28	Lesson 110	Lesson 114
Test 29	Lesson 114	Lesson 118
Test 30	Lesson 118	Lesson 122
Test 31	Lesson 122	Lesson 126
Test 32	Lesson 126	Lesson 126

1. Find  $m$ ,  $n$ , and  $p$ .

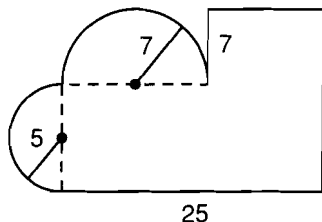


2. Find  $a$ ,  $b$ , and  $c$ .

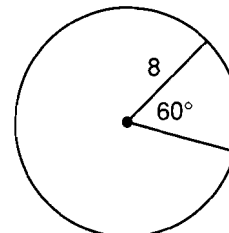


3. The complement of an angle is  $37^\circ$ . What is the measure of the angle?

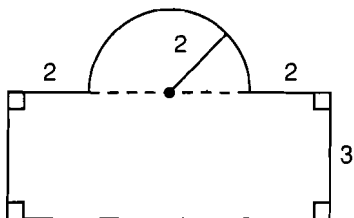
4. Find the perimeter of this figure. All angles that look square are square. Dimensions are in meters.



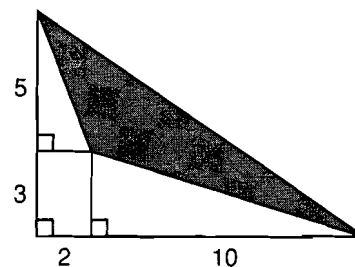
5. Find the area of the  $60^\circ$  sector of the circle. Dimensions are in inches.



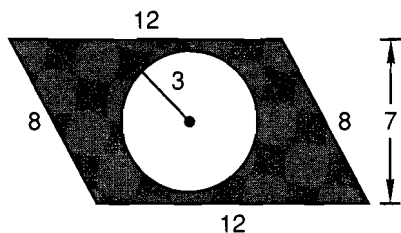
6. The figure shown is the base of a cone whose altitude is 5 centimeters. What is the volume of the cone? Dimensions are in centimeters.



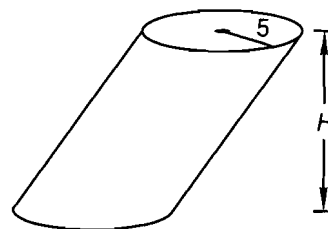
7. Find the area of the shaded region. Dimensions are in feet.



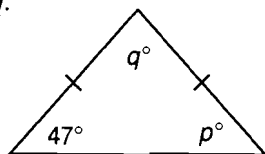
8. Find the area of the shaded region. Dimensions are in centimeters.



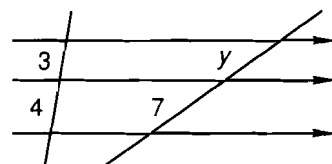
9. The volume of this circular cylinder is  $750\pi$  in<sup>3</sup>. What is the height of the cylinder?



10. Find  $p$  and  $q$ .



11. Find  $y$ .



12. Find the volume and the surface area of a sphere whose radius is 9 inches.

Simplify. Write the answer with exponential expressions in the numerator.

13.  $\frac{(xy^2)^0 x^2 y}{x(y^{-3})^3}$

14.  $\frac{(x^3 y^{-1})^{-2} z^{-2}}{(y^3 z y^{-2})^5}$

15.  $\frac{x^3 y^2 z^{-2}}{(xw^0)^{-2} z^{-1} x^2 w^3}$

Simplify:

16.  $-4^{-3}$

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

18.  $-5^2 - [-3^0 - (2 - 3) - 3]$

19.  $-|-3 - 5| - (-3)^2 - 3^2$

20.  $-4[6^0 - 5(3 - 6) - 3^3]$

# Algebra 2

Second Edition

## Problem Set Answers

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### Answers

#### problem set A

1. 115    2. 50    3.  $x = 91$ ;  $y = 89$ ;  $p = 91$     4.  $x = 40$ ;  $y = 25$ ;  $z = 80$   
5.  $140^\circ$     6.  $50^\circ$     7. 0    8. -5    9. 0    10. -11    11. -10    12. -21  
13. 5    14. -30    15. 4    16. -13    17. -16    18. -45    19. -66  
20. -12    21. 0    22. -13    23. 35    24. -24    25. 11    26.  $-\frac{5}{6}$   
27. -10    28.  $\frac{13}{7}$     29. 192    30. -98

#### problem set B

1.  $13.76 \text{ m}^2$     2.  $21 \text{ m}^2$     3.  $136.96 \text{ cm}^2$     4. 20.28 m    5.  $8.72 \text{ m}^2$   
6.  $40 \text{ cm}^3$     7.  $18.28 \text{ m}^2$ ;  $146.24 \text{ m}^3$     8.  $904.32 \text{ cm}^3$ ;  $452.16 \text{ cm}^2$     9.  $62.8 \text{ cm}^2$   
10. 32.56 yd    11.  $x = 35$ ;  $y = 110$ ;  $z = 110$     12. 10    13. 20    14.  $80^\circ$   
15.  $120^\circ$     16. -18    17. -4    18. -15    19. 23    20. -13    21. 26  
22. -23    23. -16    24. -7    25. -11    26. -1    27. 6    28.  $-\frac{3}{7}$     29. 0  
30. 19

#### practice

- a.  $m\angle C = 35^\circ$ ;  $m\angle B = 110^\circ$     b.  $x = 35$ ;  $y = 105$   
c.  $A = 50$ ;  $B = 65$ ;  $C = 50$     d.  $\frac{8}{3}$

#### problem set 1

1.  $x = 45$ ;  $y = 90$     2.  $x = 55$ ;  $y = 70$     3.  $A = 70$ ;  $B = 110$ ;  $C = 55$   
4.  $\frac{9}{2}$     5.  $17.49 \text{ cm}^2$     6.  $77.5 \text{ cm}^2$     7. 60.56 ft    8.  $401.92 \text{ ft}^3$ ;  $267.95 \text{ ft}^3$   
9.  $x = 30$ ;  $y = 30$ ;  $p = 150$     10.  $x = 6$ ;  $y = 30$ ;  $p = 120$     11.  $73^\circ$   
12.  $102.97 \text{ m}^3$     13.  $16r^2$     14. -15    15. -100    16. 52    17. -35  
18. 36    19. 87    20. -17    21. 46    22. -34    23. -87    24. 6  
25. -69    26. -12    27.  $-\frac{6}{13}$     28. -214    29. -15    30. 216

#### practice

- a.  $-\frac{1}{16}$     b.  $-\frac{1}{16}$     c.  $x^{-1}y^4$     d. 43.96 cm

#### problem set 2

1.  $\frac{9}{2}$     2.  $x = 38$ ;  $y = 104$     3.  $178.99 \text{ m}^3$     4.  $A = 20$ ;  $B = 50$ ;  $C = 40$   
5.  $A = 120$ ;  $B = 30$ ;  $C = 40$     6. 4 cm; 1 cm;  $3.14 \text{ cm}^2$     7. 10 cm  
8.  $8.76 \text{ m}^3$     9.  $x^6y^{-12}$     10.  $m^9p^{-3}$     11.  $x^{-1}y^7$     12.  $ab^6$     13.  $\frac{m^5y^3}{x^2}$