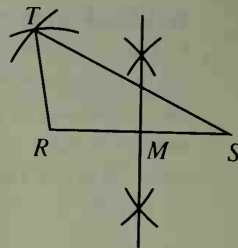


27. Const.  $\overline{RS}$  so that  $RS = a$ . Const. the  $\perp$  bis. of  $\overline{RS}$  to locate midpt.  $M$ . Draw an arc with ctr.  $M$  and radius  $b$  and an arc with ctr.  $R$  and radius  $c$ , int. at  $T$ . Draw  $\overline{TR}$  and  $\overline{TS}$ .



### Algebra Review, Page 419

1. 1.69    3.  $\frac{19}{3}$     5.  $18\sqrt{2}$     7. 2826    9. 42    11.  $-\frac{1}{2}$     13. 54  
 15.  $15\sqrt{2}$     17. 96    19.  $cd$     21.  $\pi r l$     23.  $\pi d^2$     25.  $x = \frac{c - by}{a}, a \neq 0$   
 27.  $n = \frac{S}{180} + 2$     29.  $h = \pm\sqrt{xy}$     31.  $h = \frac{2A}{b}, b \neq 0$

### Preparing for College Entrance Exams, Page 420

1. B    2. C    3. E    4. A    5. B    6. C    7. A    8. C    9. E

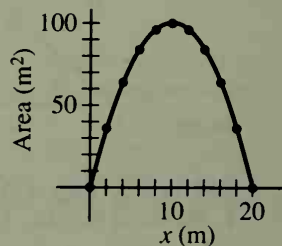
### Cumulative Review, Page 421

1. never    3. sometimes    5. always    7. never    9. 107    11. 15    13. Methods may vary: SSS, SAS, ASA    15. a. 3.6    b.  $4\frac{2}{7}$     17. 1.  $m\angle 1 = 45$  (Given)    2.  $m\widehat{PQ} = 90$  (Thm. 9-7)    3.  $m\angle O = 90$  (Def. meas. of arc)    4.  $\overline{OP} \cong \overline{OQ}$  (All radii of a  $\odot$  are  $\cong$ .)    5.  $m\angle OQP = m\angle OPQ$  (Isos.  $\triangle$  Thm.)  
 6.  $m\angle OQP + m\angle OPQ = 90$ ;  $2m\angle OPQ = 90$ ;  $m\angle OPQ = m\angle OQP = 45$  (Thm. 3-11 Cor. 4, algebra)  
 7.  $\triangle OPQ$  is a  $45^\circ-45^\circ-90^\circ \triangle$ . (Def. of  $45^\circ-45^\circ-90^\circ \triangle$ )    19. Methods may vary. Draw line  $k$  and pts.  $P$  and  $Q$  on  $k$  so that  $PQ < AB$ . Const. line  $l \perp$  to  $k$  at  $P$  and line  $m \perp$  to  $k$  at  $Q$ . Draw an arc with ctr.  $Q$  and radius  $AB$  int.  $l$  at  $S$ . Draw an arc with ctr.  $P$  and radius  $AB$  int.  $m$  at  $R$ . Draw  $\overline{RS}$ .

## Chapter 11

### Written Exercises, Pages 426–427

1.  $60 \text{ cm}^2$     3. 5 cm    5. 24    7.  $2x^2 - 6x$     9.  $36 \text{ cm}^2$ ; 26 cm  
 11. 5 cm;  $80 \text{ cm}^2$     13.  $a^2 - 9$ ;  $4a$     15.  $x - 3$ ;  $4x - 6$     17. 130  
 19. 48    21. 39.4    23.  $40xy$     25.  $\frac{d^2}{2}$     27.  $144 \text{ m}^2$     29. a.  $768 \text{ ft}^2$   
 b. 3 cans    31.  $14 \text{ m} \times 28 \text{ m}$     35. a. length  $= \frac{1}{2}(40 - 2x) = 20 - x$   
 b.  $20x - x^2$     c. See figure at right.    d.  $10 \text{ m} \times 10 \text{ m}$



### Written Exercises, Pages 431–433

1.  $29.9 \text{ m}^2$     3. 12    5.  $16\sqrt{3}$     7. 40    9. 84    11. 16    13.  $30\sqrt{2}$     15.  $\frac{25\sqrt{3}}{2}$     17. 240  
 19.  $2r^2$     21. 18.2    23. 73.5    25.  $\triangle DFE \sim \triangle DGF \sim \triangle FGE$ ; 20, 4, 16    27. 40; 20    29. a. 2:3  
 b. 20    31. a.  $A = \frac{1}{2}ab$     b.  $A = \frac{1}{2}ch$     c.  $h = \frac{ab}{c}$     d. 4.8; 5    33. a.  $b = s, h = \frac{s\sqrt{3}}{2}$ ;  
 $A = \frac{1}{2} \cdot s \cdot \frac{s\sqrt{3}}{2} = \frac{s^2\sqrt{3}}{4}$     b.  $\frac{49\sqrt{3}}{4}$     35. 10; 20    37. 41.5    39.  $936 \text{ cm}^2$ ;  $504 \text{ cm}^2$

### Written Exercises, Pages 436–438

1. 70; 10    3.  $6; 3\frac{3}{4}$     5. 5; 18    7. 1; 4    9. 9    11. 108    13.  $\frac{27\sqrt{3}}{4}$     15. 24    17. 128  
 Answers may vary in Exs. 19–21.    19. 42.0    21. 87.8    23. 15; 74    25.  $\triangle ABC: 36\sqrt{3}$ ;  $\triangle ACD: 72\sqrt{3}$ ;  
 $ADEF: 108\sqrt{3}$     27.  $12.5 \text{ cm}^2$ ;  $112.5 \text{ cm}^2$     29.  $\frac{175 - 25\sqrt{3}}{2}$     31. 156