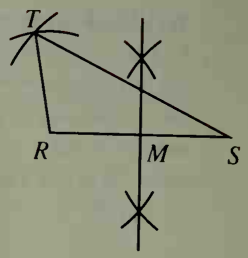
27. Const. $\overline{RS}$ so that $RS = a$. Const. the $\perp$ bis. of $\overline{RS}$ to locate midpt. M. Draw an arc with ctr. M and radius b and an arc with ctr. R and radius c, int. at T. Draw $\overline{TR}$ and $\overline{TS}$.



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.** πrl **23.** πd^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

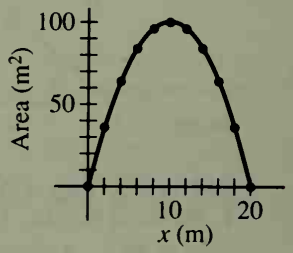
Cumulative Review, Page 421

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. $m\overset{\frown}{PQ} = 90$ (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 $45°-45°-90°$ $\triangle$. (Def. of $45°-45°-90°$ $\triangle$) **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 cm^2 **3.** 5 cm **5.** 24 **7.** $2x^2 - 6x$ **9.** 36 cm^2; 26 cm **11.** 5 cm; 80 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 m^2 **29. a.** 768 ft^2 **b.** 3 cans **31.** 14 m × 28 m **35. a.** length $= \frac{1}{2}(40 - 2x) = 20 - x$ **b.** $20x - x^2$ **c.** See figure at right. **d.** 10 m × 10 m



Written Exercises, Pages 431–433

1. 29.9 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 cm^2; 504 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 cm^2; 112.5 cm^2 **29.** $\frac{175 - 25\sqrt{3}}{2}$ **31.** 156