

26F

$$\begin{array}{r} 1) \quad 5:27 \\ - 1:19 \\ \hline 4:08 \end{array}$$

$$\begin{array}{r} 2) \quad 3:86 \\ - 3:50 \\ \hline :36 \end{array}$$

$$\begin{array}{r} 3) \quad 13:19 \\ + 1:55 \\ \hline 5:14 \end{array}$$

$$\begin{array}{r} 4) \quad \quad X + 6 \\ \quad \quad \times \frac{X + 5}{5X + 30} \\ \hline \quad \quad X^2 + 6X \\ \hline X^2 + 11X + 30 \end{array}$$

$$\begin{array}{r} 5) \quad \quad X + 9 \\ \quad \quad \times \frac{X + 2}{2X + 18} \\ \hline \quad \quad X^2 + 9X \\ \hline X^2 + 11X + 18 \end{array}$$

$$\begin{array}{r} 6) \quad \quad 3X + 1 \\ \quad \quad \times \frac{X + 5}{15X + 5} \\ \hline \quad \quad 3X^2 + X \\ \hline 3X^2 + 16X + 5 \end{array}$$

$$7) \quad 2(6 \times 12) + 2(6 \times 3) + 2(12 \times 3) = 144 + 36 + 72 = 252 \text{ sq. yds.}$$

$$8) \quad 4.8 \times 4.8 + 4(4.8 \times 6.5 \times 1/2) = 23.04 + 62.4 = 85.44 \text{ sq. in.}$$

$$9) \quad 2(5 \times 8) + 2(5 \times 2.1) + 2(8 \times 2.1) = 80 + 21 + 33.6 = 134.6 \text{ sq. ft.}$$

$$10) \quad .50 = \frac{50}{100} = \frac{1}{2}$$

$$11) \quad \frac{35}{100} = \frac{7}{20}$$

$$12) \quad \frac{875}{1000} = \frac{175}{200} = \frac{35}{40} = \frac{7}{8}$$

$$13) \quad \frac{40}{100} = \frac{2}{5}$$

14) obtuse

15) acute

$$16) \quad 3:30 + 1:45 = 5:15$$

$$17) \quad 230 - 32 = 198 \\ 198 \times 5/9 = 110^\circ \text{ (110.9}^\circ\text{)}$$

$$18) \quad 25 - 15 = 10 \text{ away games} \\ .40 \times 10 = 4 \text{ away games lost}$$

$$19) \quad 3.14 \times (28)^2 \times 48 = 118,164.48 \text{ cu. ft.}$$

$$20) \quad 9\frac{5}{8} + 6\frac{4}{8} = 15\frac{9}{8} = 16\frac{1}{8}$$

27A

1) done

2) done

$$3) \quad V = 1/3Bh \\ V = 1/3(10 \times 10)(40) \\ V = 1,333.33 \text{ cu. in.}$$

$$4) \quad V = 1/3Bh \\ V = 1/3(3.14)(2^2)(6) \\ V = 25.12 \text{ cu. in.}$$

$$5) \quad V = 1/3Bh \\ V = 1/3(3.6 \times 3.6)(4) \\ V = 17.28 \text{ cu. ft.}$$

$$6) \quad V = 1/3Bh \\ V = 1/3(3.14)(4.2^2)(9) \\ V = 166.17 \text{ cu. ft.}$$

$$7) \quad 1/3(2.5 \times 2.5)(4.5) = 9.38 \text{ cu. yd. rounded}$$

or:

$$\frac{1}{3} \times \frac{5}{2} \times \frac{5}{2} \times \frac{9}{2} =$$

$$\frac{225}{24} = 9\frac{3}{8} \text{ cu. yd.}$$

$$8) \quad 1/3(3.14)(4.5^2)(8) = 169.56 \text{ cu. in.}$$

27B

$$1) \quad V = 1/3Bh \\ V = 1/3(3.5 \times 3.5)(3.5) \\ V = 14.30 \text{ cu. yds.}$$

$$2) \quad V = 1/3Bh \\ V = 1/3(3.14)(3.4^2)(7) \\ V = 84.70 \text{ cu. in.}$$

$$3) \quad V = 1/3Bh \\ V = 1/3(5 \times 5)(6) \\ V = 50 \text{ cu. in.}$$

$$4) \quad V = 1/3Bh \\ V = 1/3(3.14)(5^2)(8) \\ V = 209.33 \text{ cu. in.}$$

$$5) \quad V = 1/3Bh \\ V = 1/3(2.4 \times 2.4)(5) \\ V = 9.6 \text{ cu. ft.}$$

$$6) \quad V = 1/3Bh \\ V = 1/3(3.14)(11^2)(14.3) \\ V = 1,811.05 \text{ cu. ft.}$$

$$7) \quad 1/3(3 \times 3)(4) = 12 \text{ cu. yds.}$$

$$8) \quad 1/3(3.14)(2^2)(5) = 20.93 \text{ cu. in.}$$

27C

$$1) \quad V = 1/3Bh \\ V = 1/3(60 \times 60)(50) \\ V = 60,000 \text{ cu. ft.}$$

$$2) \quad V = 1/3Bh \\ V = 1/3(3.14)(62^2)(52) \\ V = 209,216.11 \text{ cu. ft.}$$

$$3) \quad V = 1/3Bh \\ V = 1/3(1 \times 1)(9) \\ V = 3 \text{ cu. in.}$$

$$4) \quad V = 1/3Bh \\ V = 1/3(3.14)(8^2)(12.4) \\ V = 830.63 \text{ cu. in.}$$

$$5) \quad V = 1/3Bh \\ V = 1/3(4.8 \times 4.8)(10) \\ V = 76.8 \text{ cu. ft.}$$

$$6) \quad V = 1/3Bh \\ V = 1/3(3.14)(14^2)(17) \\ V = 3,487.49 \text{ cu. ft.}$$

$$7) \quad 6 \times 6 \times 6 = 216 \text{ cu. in.} \\ 1/3(6 \times 6)(6) = 72 \text{ cu. in.}$$

$$8) \quad 1/3(3.14)(3^2)(6) = 56.52 \text{ cu. in.}$$

27D

- 1) $V = 1/3(3 \times 3)(12) = 36$ cu. in.
- 2) $1/3(3/14)(3^2)(12) = 113.04$ cu. in.
- 3) $2:5 \ 2 + 5 = 2:5 \ 7$
 $-1:5 \ 5 + 5 = 2:0 \ 0$
 $\quad\quad\quad :5 \ 7$
- 4) $\begin{array}{r} 1\ 1\ 5 \ 6 \\ + 2\ 4 \ 9 \\ \hline 4:4 \ 5 \end{array}$
- 5) $\begin{array}{r} 1\ 3:5 \ 2 \\ + 1:4 \ 0 \\ \hline 5:3 \ 2 \end{array}$
- 6) $X^2 + 10X + 21$
- 7) $2X^2 + 9X + 4$
- 8) $X^2 + 7X + 6$
- 9) $8(12.8) = 3.2P$
 $102.4 = 3.2P$
 $P = 102.4 \div 3.2 = 32$
- 10) $75X = 12(15)$
 $75X = 180$
 $X = 2.4$
- 11) $8R = 5(32)$
 $8R = 160$
 $R = 20$
- 12) mean = $\frac{1+2+3+6+7+8+8}{7} = \frac{35}{7} = 5$
 median = 6
 mode = 8
- 13) mean = $\frac{2+4+4}{3} = \frac{10}{3} = 3.33$
 median = 4
 mode = 4
- 14) mean = $\frac{9+9+11+12+13}{5} = \frac{54}{5} = 10.8$
 median = 11
 mode = 9
- 15) mean = $\frac{15+25+25}{3} = \frac{65}{3} = 21.67$
 median = 25
 mode = 25
- 16) $9^2 + 12^2 = H^2$
 $81 + 144 = H^2$
 $225 = H^2$
 $15 \text{ ft.} = H$
- 17) 90°
- 18) Infinity

27E

- 1) $1/3(8 \times 8)(5.3) = 113.07$ cu. ft.
- 2) $1/3(3.14)(4.5^2)(15) = 317.93$ cu. in.
- 3) $\begin{array}{r} 6:1 \ 5 + :20 = 6:3 \ 5 \\ - 2:4 \ 0 + :20 = 3:0 \ 0 \\ \hline 3:3 \ 5 \end{array}$
- 4) $\begin{array}{r} 5:1 \ 0 + :27 = 5:3 \ 7 \\ - 3:3 \ 3 + :27 = 4:0 \ 0 \\ \hline 1:3 \ 7 \end{array}$
- 5) $\begin{array}{r} 6:1 \ 8 \\ + 2:2 \ 9 \\ \hline 8:4 \ 7 \end{array}$
- 6) $X^2 + 7X + 12$
- 7) $X^2 + 9X + 20$
- 8) $X^2 + 9X + 8$
- 9) $84P = 7(72)$
 $84P = 504$
 $P = 6$
- 10) $3A = 10(18)$
 $3A = 180$
 $A = 60$
- 11) $32B = 4(24)$
 $32B = 96$
 $B = 3$
- 12) $\frac{4}{5} \div \frac{1}{7} = \frac{4}{5} \times \frac{7}{1} = \frac{28}{5} = 5 \frac{3}{5}$
- 13) $\frac{4}{9} \times \frac{18}{20} = \frac{2}{5}$
- 14) $\frac{2}{3} \div \frac{1}{9} = \frac{2}{3} \times \frac{9}{1} = \frac{18}{3} = 6$
- 15) mean = $\frac{5+5+6+6+6+6+7+7+10+11}{9} = 7$
 median = 6
 mode = 6
- 16) ± 12
- 17) acute
- 18) $\frac{2}{3} + \frac{3}{4} + \frac{1}{2} = \frac{8}{12} + \frac{9}{12} + \frac{6}{12} = \frac{23}{12} = 1 \frac{11}{12}$
- 19) $1:16 + 7:51 = 9:07$
- 20) $6X^2 + 5X + 13$

27F

- 1) $\frac{1}{3}(5 \times 5)(12) = 100$ cu. ft.
- 2) $\frac{1}{3}(3.14)(10^2)(30) = 3,140$ cu. in.
- 3)
$$\begin{array}{r} 3:17 \\ + 5:50 \\ \hline 9:07 \end{array}$$
- 4)
$$\begin{array}{r} 5:32 \\ + 1:40 \\ \hline 7:12 \end{array}$$
- 5)
$$\begin{array}{r} 8:16 \\ + 3:30 \\ \hline 11:46 \end{array}$$
- 6) $X^2 + 4X + 4$
- 7) $2X^2 + 10X + 12$
- 8) $X^2 + 5X$
- 9) $2X = 54$
 $X = 27$
- 10) $40T = 40$
 $T = 1$
- 11) $4Q = 84$
 $Q = 21$
- 12) b
- 13) c
- 14) a
- 15) mean =
$$\frac{15 + 20 + 25 + 30 + 35 + 35 + 40}{7} = \frac{200}{7} = 28.57$$

median = 30
mode = 35
- 16) $11:13 - 8:25 = 2:48$
- 17) straight
- 18) no; he was saying that 51° was the average high temperature for the month.
- 19) a point
- 20) $\$3.60 \times 6 = \21.60
 $\$21.60 \times 1.04 = \22.46 (rounded)

28A

- 1) done
- 2) done
- 3) $9:25 + 12:00 = 2125$
- 4) 0810
- 5) done
- 6) done
- 7) $1921 - 12:00 = 7:21$ PM
- 8) 9:48 AM
- 9) done
- 10)
$$\begin{array}{r} 1215 \\ + 0842 \\ \hline 2057 \end{array}$$
- 11)
$$\begin{array}{r} 11 \\ 0328 \\ + 1950 \\ \hline 2318 \end{array}$$
- 12) done
- 13)
$$\begin{array}{r} 8 \\ 16\cancel{0}0 \\ - 1345 \\ \hline 0345 \end{array}$$
- 14)
$$\begin{array}{r} 19 \\ 2062 \\ - 0320 \\ \hline 1742 \end{array}$$
- 15) done
- 16)
$$\begin{array}{r} 2314 + 35 = 2349 \\ - 2125 + 35 = 2200 \\ \hline 0149 \end{array}$$
- 17)
$$\begin{array}{r} 1630 + 15 = 1645 \\ - 1245 + 15 = 1300 \\ \hline 0345 \end{array}$$
- 18) $1100 + 4:00 = 1500$

28B

- 1) $10:10 + 12:00 = 2210$
- 2) $7:15 + 12:00 = 1915$
- 3) 0100
- 4) 0620
- 5) $2310 - 12:00 = 11:10$ PM
- 6) $1314 - 12:00 = 1:14$ PM
- 7) 6:50 AM
- 8) 1:05 AM
- 9)
$$\begin{array}{r} 1 \\ 0554 \\ + 0325 \\ \hline 0919 \end{array}$$
- 10)
$$\begin{array}{r} 1315 \\ + 1040 \\ \hline 2355 \end{array}$$
- 11)
$$\begin{array}{r} 11 \\ 1148 \\ + 0152 \\ \hline 1340 \end{array}$$
- 12)
$$\begin{array}{r} 0895 \\ - 0251 \\ \hline 0644 \end{array}$$
- 13)
$$\begin{array}{r} 1180 \\ - 1130 \\ \hline 0050 \end{array}$$
- 14)
$$\begin{array}{r} 2275 \\ - 2045 \\ \hline 0230 \end{array}$$
- 15)
$$\begin{array}{r} 1821 + 25 = 1846 \\ - 1535 + 25 = 1600 \\ \hline 0246 \end{array}$$
- 16)
$$\begin{array}{r} 2206 + 40 = 2246 \\ - 0420 + 40 = 0500 \\ \hline 1746 \end{array}$$
- 17)
$$\begin{array}{r} 0938 + 10 = 0948 \\ - 0250 + 10 = 0300 \\ \hline 0648 \end{array}$$
- 18) $3:14 + 12:00 = 1514$

28C

- 1) $8:20 + 12:00 = 2020$
- 2) 0540
- 3) 0000
- 4) 1200
- 5) $1730 - 12:00 = 5:30$ PM
- 6) $2150 - 12:00 = 9:50$ PM
- 7) 5:35 AM
- 8) 12:15 AM
- 9)
$$\begin{array}{r} 11 \\ 1028 \\ + 0035 \\ \hline 1103 \end{array}$$
- 10)
$$\begin{array}{r} 11 \\ 2045 \\ + 0245 \\ \hline 2330 \end{array}$$
- 11)
$$\begin{array}{r} 11 \\ 1618 \\ + 0718 \\ \hline 2336 \end{array}$$
- 12)
$$\begin{array}{r} 51 \\ 23\cancel{0}0 \\ - 1128 \\ \hline 1232 \end{array}$$
- 13)
$$\begin{array}{r} 1355 \\ - 0655 \\ \hline 0700 \end{array}$$
- 14)
$$\begin{array}{r} 61 \\ 06\cancel{7}4 \\ - 0045 \\ \hline 0629 \end{array}$$
- 15)
$$\begin{array}{r} 1700 + 18 = 1718 \\ - 0342 + 18 = 0400 \\ \hline 1318 \end{array}$$
- 16)
$$\begin{array}{r} 2319 + 01 = 2320 \\ - 1259 + 01 = 1300 \\ \hline 1020 \end{array}$$
- 17)
$$\begin{array}{r} 1012 + 22 + 1034 \\ - 0938 + 22 = 1000 \\ \hline 0034 \end{array}$$
- 18) $1015 + 1300 = 2315$