

17A

- 1) done
- 2) $(86 - 32)\frac{5}{9} = C$
 $\frac{6}{(54)}\frac{5}{9} = C$
 $30^\circ = C$
- 3) 15°
- 4) 20°
- 5) 5°
- 6) 50°
- 7) done
- 8) $(80 - 32)\frac{5}{9} = C$
 $(48)\frac{5}{9} = C$
 $\frac{240}{9} = C$
 $26\frac{6}{9} = C$
 $26.7^\circ = C$
- OR
- $(80 - 32)(.56) = C$
 $(48)(.56) = C$
 $26.9^\circ = C$
- 9) 12.2° or 12.3
- 10) 22.2° (22.4°)
- 11) 4.4° (4.5°)
- 12) 16.7° (16.8°)
- 13) 98.6 ; 37
- 14) 8.33° ; (8.4°) no
- 15) 31.1° (31.4°)
- 16) $32^\circ \text{ F}; 0^\circ \text{ C}$
- 17) 22.2° (22.4°)
- 18) 43.3° (43.7°)

17B

Decimal answers are rounded to the nearest tenth.

- 1) -5°
- 2) 60° (60.5°)
- 3) 25° (25.2°)
- 4) -15° (15.1°)
- 5) 80° (80.6°)
- 6) 35° (35.3°)
- 7) $.6^\circ$
- 8) 12.8° (12.9°)
- 9) 25.6° (25.8°)
- 10) -16.7° (16.8°)
- 11) 32.8° (33°)
- 12) -23.3° (23.5°)
- 13) $212^\circ \text{ F}; 100^\circ \text{ C}$
- 14) 11.7° (11.8°)
- 15) 38.3° (38.6°); yes
- 16) 40°
- 17) Fahrenheit
- 18) Fahrenheit

Please Note: The second solution is the one you will get using the decimal approximation of $5/9$, which is .56.

17C

- 1) -20° (20.2°)
- 2) 55° (55.4°)
- 3) 100° (100.8°)
- 4) 30° (30.2°)
- 5) -10° (10.1°)
- 6) 75° (75.6°)
- 7) 24.4° (24.6°)
- 8) 17.8° (17.9°)
- 9) 52.8° (53.2°)
- 10) 36.7° (37°)
- 11) 15.6° (15.7°)
- 12) -31.7° (31.9°)
- 13) $32^\circ \text{ F}; 0^\circ \text{ C}$
- 14) 176.7° (178.1°)
- 15) 232.2°
- 16) Fahrenheit
- 17) 121.1° (122.1°)
- 18) Fahrenheit

17D

- 1) 65° (65.5°)
- 2) 48.9° (49.3°)
- 3) 23.9° (24.1°)
- 4) 86°
- 5) 138.2°
- 6) 32°
- 7) $4 \cdot 7 + 3^2 = X + 7$
 $28 + 9 = X + 7$
 $28 + 9 - 7 = X$
 $30 = X$
- 8) $4 \cdot 7 + 3^2 = (30) + 7$
 $28 + 9 = 37$
 $37 = 37$
- 9) $3C - 6 + 2C = 10C - 2C + 6$
 $5C - 6 = 8C + 6$
 $5C - 8C = 6 + 6$
 $-3C = 12$
 $C = -4$
- 10) $3(-4) - 6 + 2(-4) = 10(-4) - 2(-4) + 6$
 $-12 - 6 - 8 = -40 + 8 + 6$
 $-26 = -26$
- 11) done
- 12) 1.26
- 13) .286
- 14) 14.76 sq. ft.
- 15) 84.2° yes
- 16) $6 \times 1.79 = \$10.74$
 $\$20.00 - \$10.74 = \$9.26$
- 17) $\frac{3}{1} \div \frac{1}{8} = \frac{3}{1} \times \frac{8}{1} = 24$
- 18) $2(6 \times 9) + 2(6 \times 3) + 2(9 \times 3) =$
 $2(54) + 2(18) + 2(27) =$
 $108 + 36 + 54 = 198 \text{ sq. in.}$

17E

- 1) 45° (45.4°)
- 2) 15° (15.1°)
- 3) -11.1° (11.2°)
- 4) 149°
- 5) 17.6°
- 6) 212°
- 7) $7^2 - 11^2 + 4(Y + 3) = -3Y + 2(1.5)$
 $49 - 121 + 4Y + 12 = -3Y + 3$
 $-60 + 4Y = -3Y + 3$
 $4Y + 3Y = 3 + 60$
 $7Y = 63$
 $Y = 9$
- 8) $7^2 - 11^2 + 4((9) + 3) = -3(9) + 2(1.5)$
 $49 - 121 + 4(12) = -27 + 3$
 $49 - 121 + 48 = -27 + 3$
 $-24 = -24$
- 9) $81B = 9$
 $B = \frac{9}{81} = \frac{1}{9}$
- 10) $81\left(\frac{1}{9}\right) = 9$
 $9 = 9$
- 11) 1.44
- 12) .00225
- 13) 12.73
- 14) $\frac{13}{8} \times \frac{2}{2} \times \frac{2}{2} = \frac{13}{8} = 1\frac{5}{8}$
- 15) $\frac{2}{2} \times \frac{2}{2} \times \frac{2}{2} = \frac{1}{3}$
- 16) $\frac{2}{4} \times \frac{1}{2} \times \frac{2}{2} = \frac{1}{12}$
- 17) yes; 96.8°
- 18) $25.5 \times 1.6 = 40.8 \text{ miles}$
- 19) $\$.69 \times 3 = \2.07
 $\$4.00 - 2.07 = \1.93
- 20) $7^2 + 4 \times 7 - 10 = 49 + 28 - 10 = 67$

17F

- 1) 90° (90.7°)
- 2) 0°
- 3) 37.8° (38.1°)
- 4) 140°
- 5) 77°
- 6) -5.8°
- 7) $7 - B + 4 + 2B = 2B + 8 - 7$
 $11 + B = 2B + 1$
 $B - 2B = 1 - 11$
 $-B = -10$
 $B = 10$
- 8) $7 - (10) + 4 + 2(10) = 2(10) + 8 - 7$
 $7 - 10 + 4 + 20 = 20 + 8 - 7$
 $21 = 21$
- 9) $16X = 5$
 $X = \frac{5}{16}$
- 10) $16\left(\frac{5}{16}\right) = 5$
 $5 = 5$
- 11) .456
- 12) .0738
- 13) .0735
- 14) $\frac{12}{5} \times \frac{11}{4} = \frac{33}{5} = 6\frac{3}{5}$
- 15) $\frac{4}{8} \times \frac{8}{2} = \frac{2}{1} = 2$
- 16) $\frac{7}{8} \times \frac{45}{7} = \frac{9}{1} = 9$
- 17) Celsius; 3° Fahrenheit
 is below freezing
- 18) 5.25 buckets
- 19) $\$99 \times 4 = \3.96
 $\$10 - \$3.96 = \$6.04$
- 20) $4(12 \times 14 \times 1/2) + 12 \times 12 =$
 $4(84) + 144 =$
 $336 + 144 = 480 \text{ sq. in.}$

18A

- 1) done
- 2) done
- 3) $|5 \cdot 6^2| = |5 \cdot 36| = |180| = 180$
- 4) $|-10 - 13| = |-23| = 23$
- 5) $|-6 + 8| = |2| = 2$
- 6) $|18 + 2^3| = |18 + 8| = |26| = 26$
- 7) $|3^2 - 5^2| - (15 \div 3)^3 + 18 =$
 $|9 - 25| - (5)^3 + 18 =$
 $|-16| - 125 + 18 =$
 $16 - 125 + 18 = -91$
- 8) $|10^2 - 5^2| + |-8^2 + 2^2| =$
 $|100 - 25| + |-64 + 4| =$
 $|75| + |-60| =$
 $75 + 60 = 135$
- 9) $|6 \div (-2)| \times 5 + 3^2 =$
 $|-3| \times 5 + 9 =$
 $3 \times 5 + 9 =$
 $15 + 9 = 24$
- 10) $-4(P - 6) + 2P = |5 - 3 + 6|$
 $-4P + 24 + 2P = |8|$
 $-2P + 24 = 8$
 $-2P = 8 - 24$
 $-2P = -16$
 $P = 8$
- 11) $-5X + |9^2 - 3^2| + 13 = 12X$
 $-5X + |81 - 9| + 13 = 12X$
 $-5X + |72| + 13 = 12X$
 $-5X + 85 = 12X$
 $85 = 12X + 5X$
 $85 = 17X$
 $5 = X$
- 12) $3(3G + 5G) - |3 - 12| = 18G + 5(-G - 4)$
 $3(8G) - |-9| = 18G - 5G - 20$
 $24G - 9 = 13G - 20$
 $24G - 13G = -20 + 9$
 $11G = -11$
 $G = -1$
- 13) $(1^2 - 1) \div 12 = 3X + |-2|X$
 $(121 - 1) \div 12 = 3X + 2X$
 $120 \div 12 = 5X$
 $10 = 5X$
 $2 = X$
- 14) $(3 - 5)^2 + |6 - 4| + X = 3X$
 $(-2)^2 + |2| + X = 3X$
 $4 + 2 + X = 3X$
 $6 = 3X - X$
 $6 = 2X$
 $3 = X$
- 15) $|-4|^2 = (-1)^2 + B(-1) + 1$
 $4^2 = 1 - B$
 $16 = 1 - B$
 $16 - 1 = -B$
 $15 = -B$
 $-15 = B$
- 16) $163 - 75 = 88$