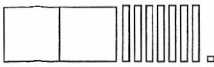
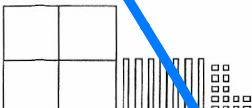


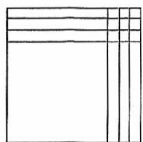
20E

$$1) \begin{array}{r} X^2 + 3X - 2 \\ X^2 + X + 3 \\ \hline 2X^2 + 7X + 1 \end{array}$$


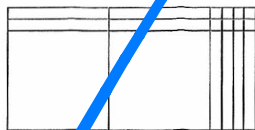
$$2) \begin{array}{r} 3X^2 + 2X - 1 \\ 2X^2 - 2X + 8 \\ \hline 5X^2 + 7 \end{array}$$


$$3) \begin{array}{r} 5X^2 + 4X + 7 \\ -X^2 + 3X + 7 \\ \hline 4X^2 + 7X + 14 \end{array}$$


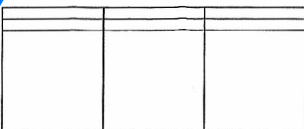
$$4) (X+3)(X+3) = X^2 + 6X + 9$$



$$5) (2X+4)(X+2) = 2X^2 + 8X + 8$$



$$6) (3X)(X+2) = 3X^2 + 6X$$



$$7) \begin{array}{r} 2X - 3 \\ x \quad X - 2 \\ \hline -4X + 6 \\ 2X^2 - 3X \\ \hline 2X^2 - 7X + 6 \end{array}$$

$$8) \begin{array}{r} X - 1 \\ x \quad X - 6 \\ \hline -6X + 6 \\ X^2 - X \\ \hline X^2 - 7X + 6 \end{array}$$

$$9) \begin{array}{r} 2X + 2 \\ x \quad X - 3 \\ \hline -6X - 6 \\ 2X^2 + 2X \\ \hline 2X^2 - 4X - 6 \end{array}$$

$$10) X^{-5}$$

$$11) \frac{1}{Y^2}$$

$$12) 7^{-2+5} = 7^3$$

$$13) A^7 B^{-3}$$

$$14) 5^{2 \cdot 5} = 5^{10}$$

$$15) (5^3)^4$$

$$16) +3, -13$$

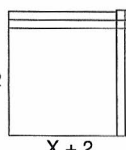
$$17) C^{-4} D^{-3+8-7} = C^{-1} D^{-2}$$

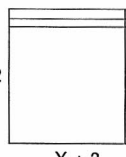
$$18) \begin{array}{r} 3N + 4 \\ + 2N + 5 \\ \hline 5N + 9 \end{array}$$

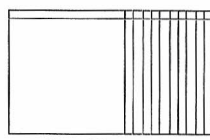
$$19) 5(10) + 9 = 59$$

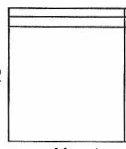
$$20) \begin{array}{r} 2Y + 7 \\ x \quad 7Y + 5 \\ \hline 10Y + 35 \\ 14Y^2 + 49Y \\ \hline 14Y^2 + 59Y + 35 \end{array}$$

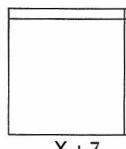
21A

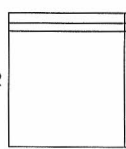
$$1) \begin{array}{r} X + 2 \\ x \quad X + 2 \\ \hline 2X + 4 \\ X^2 + 2X \\ \hline X^2 + 4X + 4 \end{array}$$


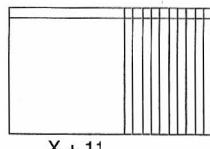
$$2) \begin{array}{r} X + 3 \\ x \quad X + 2 \\ \hline 2X + 6 \\ X^2 + 3X \\ \hline X^2 + 5X + 6 \end{array}$$


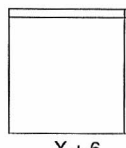
$$3) \begin{array}{r} X + 10 \\ x \quad X + 1 \\ \hline X + 10 \\ X^2 + 10X \\ \hline X^2 + 11X + 10 \end{array}$$


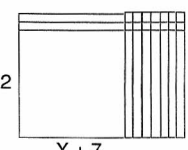
$$4) \begin{array}{r} X + 4 \\ x \quad X + 2 \\ \hline 2X + 8 \\ X^2 + 4X \\ \hline X^2 + 6X + 8 \end{array}$$


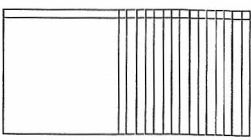
$$5) \begin{array}{r} X + 7 \\ x \quad X + 1 \\ \hline X + 7 \\ X^2 + 7X \\ \hline X^2 + 8X + 7 \end{array}$$


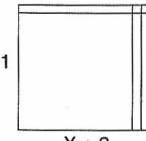
$$6) \begin{array}{r} X + 6 \\ x \quad X + 2 \\ \hline 2X + 12 \\ X^2 + 6X \\ \hline X^2 + 8X + 12 \end{array}$$


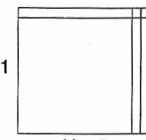
$$7) \begin{array}{r} X + 11 \\ x \quad X + 1 \\ \hline X + 11 \\ X^2 + 11X \\ \hline X^2 + 12X + 11 \end{array}$$


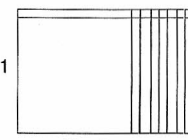
$$8) \begin{array}{r} X + 6 \\ x \quad X + 1 \\ \hline X + 6 \\ X^2 + 2X \\ \hline X^2 + 7X + 6 \end{array}$$


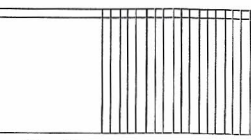
$$9) \begin{array}{r} X + 7 \\ x \quad X + 2 \\ \hline 2X + 14 \\ X^2 + 7X \\ \hline X^2 + 9X + 14 \end{array}$$


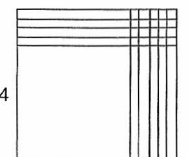
$$10) \begin{array}{r} X + 15 \\ x \quad X + 1 \\ \hline X + 15 \\ X^2 + 15X \\ \hline X^2 + 16X + 15 \end{array}$$


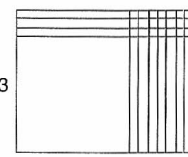
$$11) \begin{array}{r} X + 2 \\ x \quad X + 1 \\ \hline X + 2 \\ X^2 + 2X \\ \hline X^2 + 3X + 2 \end{array}$$


$$12) \begin{array}{r} X + 3 \\ x \quad X + 1 \\ \hline X + 3 \\ X^2 + 3X \\ \hline X^2 + 4X + 3 \end{array}$$


$$13) \begin{array}{r} X + 8 \\ x \quad X + 1 \\ \hline X + 8 \\ X^2 + 8X \\ \hline X^2 + 9X + 8 \end{array}$$


$$14) \begin{array}{r} X + 18 \\ x \quad X + 1 \\ \hline X + 18 \\ X^2 + 18X \\ \hline X^2 + 19X + 18 \end{array}$$


$$15) \begin{array}{r} X + 5 \\ x \quad X + 4 \\ \hline 4X + 20 \\ X^2 + 5X \\ \hline X^2 + 9X + 20 \end{array}$$


$$16) \begin{array}{r} X + 7 \\ x \quad X + 3 \\ \hline 3X + 21 \\ X^2 + 7X \\ \hline X^2 + 10X + 21 \end{array}$$


21B

1)

$$\begin{array}{r} X+8 \\ x \quad X+2 \\ \hline 2X+16 \\ X^2+8X \\ \hline X^2+10X+16 \end{array}$$

2)

$$\begin{array}{r} X+7 \\ x \quad X+4 \\ \hline 4X+28 \\ X^2+7X \\ \hline X^2+11X+28 \end{array}$$

3)

$$\begin{array}{r} X+11 \\ x \quad X+2 \\ \hline 2X+22 \\ X^2+11X \\ \hline X^2+13X+22 \end{array}$$

4)

$$\begin{array}{r} X+4 \\ x \quad X+3 \\ \hline 3X+12 \\ X^2+4X \\ \hline X^2+7X+12 \end{array}$$

5)

$$\begin{array}{r} X+5 \\ x \quad X+3 \\ \hline 3X+15 \\ X^2+5X \\ \hline X^2+8X+15 \end{array}$$

6)

$$\begin{array}{r} X+6 \\ x \quad X+5 \\ \hline 5X+30 \\ X^2+6X \\ \hline X^2+11X+30 \end{array}$$

7)

$$\begin{array}{r} X+4 \\ x \quad X+1 \\ \hline X+4 \\ X^2+4X \\ \hline X^2+5X+4 \end{array}$$

8)

$$\begin{array}{r} X+5 \\ x \quad X+1 \\ \hline X+5 \\ X^2+5X \\ \hline X^2+6X+5 \end{array}$$

9)

$$\begin{array}{r} X+4 \\ x \quad X+4 \\ \hline 4X+16 \\ X^2+4X \\ \hline X^2+8X+16 \end{array}$$

10)

$$\begin{array}{r} X+10 \\ x \quad X+2 \\ \hline 2X+20 \\ X^2+10X \\ \hline X^2+12X+20 \end{array}$$

11)

$$\begin{array}{r} X+9 \\ x \quad X+2 \\ \hline 2X+18 \\ X^2+9X \\ \hline X^2+11X+18 \end{array}$$

12)

$$\begin{array}{r} X+15 \\ x \quad X+2 \\ \hline 2X+30 \\ X^2+15X \\ \hline X^2+17X+30 \end{array}$$

13)

$$\begin{array}{r} X+5 \\ x \quad X+2 \\ \hline 2X+10 \\ X^2+5X \\ \hline X^2+7X+10 \end{array}$$

14)

$$\begin{array}{r} X+1 \\ x \quad X+1 \\ \hline X+1 \\ X^2+X \\ \hline X^2+2X+1 \end{array}$$

15)

$$\begin{array}{r} X+5 \\ x \quad X+5 \\ \hline 5X+25 \\ X^2+5X \\ \hline X^2+10X+25 \end{array}$$

16)

$$\begin{array}{r} X+25 \\ x \quad X+1 \\ \hline X+25 \\ X^2+25X \\ \hline X^2+26X+25 \end{array}$$

 Check using same method as other examples.

21C

1) $X^2 + 7X + 12 = (X+4)(X+3)$

$$\begin{array}{r} X+3 \\ x \quad X+4 \\ \hline 4X+12 \\ X^2+4X \\ \hline X^2+8X+12 \end{array}$$

2) $X^2 + 10X + 16 = (X+8)(X+2)$

$$\begin{array}{r} X+2 \\ x \quad X+8 \\ \hline 2X+16 \\ X^2+8X \\ \hline X^2+10X+16 \end{array}$$

3) $X^2 + 11X + 24 = (X+8)(X+3)$

$$\begin{array}{r} X+3 \\ x \quad X+8 \\ \hline 3X+24 \\ X^2+8X \\ \hline X^2+11X+24 \end{array}$$

4) $X^2 + 8X + 12 = (X+6)(X+2)$

$$\begin{array}{r} X+2 \\ x \quad X+6 \\ \hline 2X+12 \\ X^2+6X \\ \hline X^2+8X+12 \end{array}$$

5) $(X+4)(X+2) = X^2 + 6X + 8$

6) $(X+5)(X+3) = X^2 + 8X + 15$

7) $X^2 + 7X + 6 = (X+6)(X+1)$

$$\begin{array}{r} X+6 \\ x \quad X+1 \\ \hline X+6 \\ X^2+6X \\ \hline X^2+7X+6 \end{array}$$

9) $X^2 + 2X + 1 = (X+1)(X+1)$

$$\begin{array}{r} X+1 \\ x \quad X+1 \\ \hline X+1 \\ X^2+X \\ \hline X^2+2X+1 \end{array}$$

11)
$$\begin{array}{r} 2X^2 - 7X - 3 \\ X^2 + 5X + 9 \\ \hline 3X^2 - 2X + 6 \end{array}$$

12)
$$\begin{array}{r} 6X^2 + 2X + 1 \\ X^2 - 4X + 3 \\ \hline 7X^2 - 2X + 4 \end{array}$$

13) $P-8P^4 = P-4$

14) $R(-2)(-3)S(3)(-3) = R^6S^{-9}$

15) 225

16) ± 4

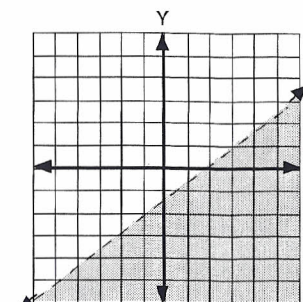
17)
$$\begin{array}{l} 11N + 2(N+2) = 6(N+4) + 1 \\ 11N + 2N + 4 = 6N + 25 \\ 7N = 25 - 4 \\ N = 3 \end{array}$$

 3, 5, 7

18)
$$\begin{array}{l} .10D + .05N = .60, \quad D + N = 9 \\ 10D + 5N = 60 \\ -5D - 5N = -45 \\ \hline 5D = 15 \\ D = 3 \end{array}$$

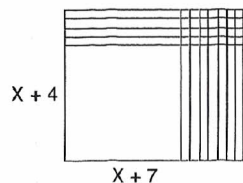
 $(3) + N = 9$
 $N = 6$

19) $7X - Y = -3$

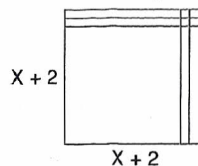


20) $Y < \frac{3}{4}X - \frac{5}{4}$

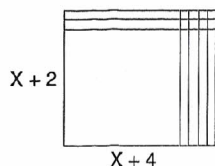
1) $X^2 + 11X + 28 = (X + 7)(X + 4)$



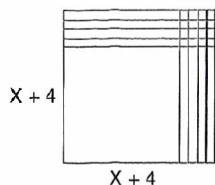
2) $X^2 + 4X + 4 = (X + 2)(X + 2)$



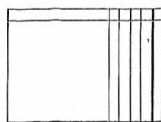
3) $X^2 + 6X + 8 = (X + 4)(X + 2)$



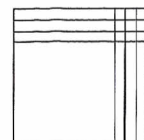
4) $X^2 + 8X + 16 = (X + 4)(X + 4)$



5) $(X + 5)(X + 1) = X^2 + 6X + 5$



6) $(X + 3)(X + 3) = X^2 + 6X + 9$



7) $X^2 + 12X + 32 = (X + 8)(X + 4)$

$$\begin{array}{r} X+8 \\ \times X+4 \\ \hline 4X+32 \\ X^2+8X \\ \hline X^2+12X+32 \end{array}$$

9) $X^2 + 20X + 100 = (X + 10)(X + 10)$

$$\begin{array}{r} X+10 \\ \times X+10 \\ \hline 10X+100 \\ X^2+10X \\ \hline X^2+20X+100 \end{array}$$

$$\begin{array}{r} X^2 + X - 4 \\ X^2 + 3X + 3 \\ \hline 2X^2 + 4X - 1 \end{array}$$

$$\begin{array}{r} 2X^2 + 7X + 6 \\ 5X^2 - 4X + 10 \\ \hline 7X^2 + 3X + 16 \end{array}$$

13) $P(5)(3)(-2) = P \cdot 30$

14) anything to the "0" power equals 1

15) 121

16) ± 12

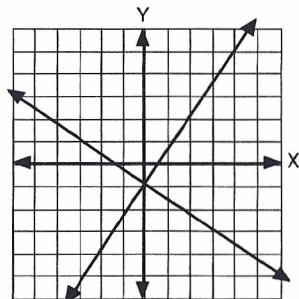
$$\begin{array}{l} 14(N+2) + 4N = 12(N+4) - 2 \\ 18N + 28 = 12N + 46 \\ 6N = 18 \\ N = 3 \end{array}$$

3, 5, 7

18) $.10D + .05N = 1.80, \quad D + N = 27$

$$\begin{array}{r} 10D + 5N = 180 \\ -5D - 5N = -135 \\ \hline 5D = 45 \\ D = 9 \end{array}$$

$$\begin{array}{l} (9) + N = 27 \\ N = 18 \end{array}$$

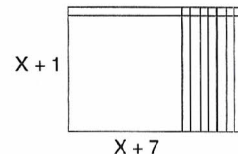


19) on the graph

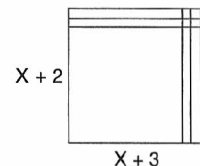
20) $m = -2/3$

$$\begin{array}{l} (-3) = -2/3(3) + b \\ b = -1 \end{array}$$

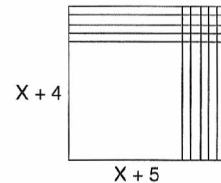
1) $X^2 + 8X + 7 = (X + 7)(X + 1)$



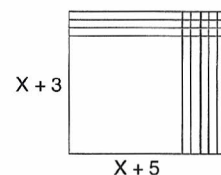
2) $X^2 + 5X + 6 = (X + 3)(X + 2)$



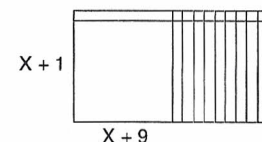
3) $X^2 + 9X + 20 = (X + 5)(X + 4)$



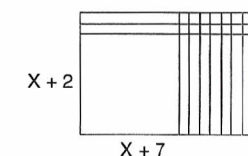
4) $X^2 + 8X + 15 = (X + 5)(X + 3)$



5) $(X + 1)(X + 9) = X^2 + 10X + 9$



6) $(X + 7)(X + 2) = X^2 + 9X + 14$



7) $X^2 + 7X + 12 = (X + 3)(X + 4)$

$$\begin{array}{r} X+3 \\ \times X+4 \\ \hline 4X+12 \\ X^2+3X \\ \hline X^2+7X+12 \end{array}$$

9) $X^2 + 10X + 21 = (X + 3)(X + 7)$

$$\begin{array}{r} X+3 \\ \times X+7 \\ \hline 7X+21 \\ X^2+3X \\ \hline X^2+10X+21 \end{array}$$

$$\begin{array}{r} 4X^2 - 4X + 1 \\ X^2 + 2X - 1 \\ \hline 5X^2 - 2X + 0 \end{array}$$

$$\begin{array}{r} 2X^2 + 3X + 3 \\ X^2 + 7X - 2 \\ \hline 3X^2 + 10X + 1 \end{array}$$

13) $P^{0+4-1} = P^3$

14) $S^{(2)(-2)}R^5 = S^{-4}R^5 \quad (R^0 \text{ and } S^0 = 1)$

15) 169

16) ± 5

$$\begin{array}{l} (N+1) + 7(N+2) = 5N \\ N+1+7N+14=5N \\ 8N+15=5N \\ N=-5 \end{array}$$

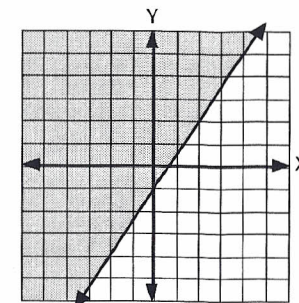
-5, -4, -3

18) $.01P + .05N = .76, \quad P + N = 20$

$$\begin{array}{r} P + 5N = 76 \\ -P - N = -20 \\ \hline 4N = 56 \\ N = 14 \end{array}$$

$$\begin{array}{l} P + (14) = 20 \\ P = 6 \end{array}$$

19) $Y = -3/4 X + 4$



20) $Y \geq 3/2 X - 1$

3C

$$\begin{aligned} 1) \quad X + 3 &= 9 \\ X + 3 - 3 &= 9 - 3 \\ X &= 6 \end{aligned}$$

$$\begin{aligned} 2) \quad X + 6 &= 10 \\ X + 6 - 6 &= 10 - 6 \\ X &= 4 \end{aligned}$$

$$\begin{aligned} 3) \quad 2X + 5 &= 11 \\ 2X + 5 - 5 &= 11 - 5 \\ 2X &= 6 \\ 2X \div 2 &= 6 \div 2 \\ X &= 3 \end{aligned}$$

$$\begin{aligned} 4) \quad 4Q - 2 &= 10 \\ 4Q - 2 + 2 &= 10 + 2 \\ 4Q &= 12 \\ 4Q \div 4 &= 12 \div 4 \\ Q &= 3 \end{aligned}$$

$$\begin{aligned} 5) \quad 4X + 2 &= 2X + 8 \\ 4X + 2 - 2 &= 2X + 8 - 2 \\ 4X &= 2X + 6 \\ 4X - 2X &= 2X - 2X + 6 \\ 2X &= 6 \\ 2X \div 2 &= 6 \div 2 \\ X &= 3 \end{aligned}$$

$$\begin{aligned} 6) \quad 3Y + 5 &= 2Y + 7 \\ 3Y + 5 - 5 &= 2Y + 7 - 5 \\ 3Y &= 2Y + 2 \\ 3Y - 2Y &= 2Y - 2Y + 2 \\ Y &= 2 \end{aligned}$$

$$\begin{aligned} 7) \quad Q + 4 &= 3Q - 6 \\ Q + 4 - Q &= 3Q - Q - 6 \\ 4 &= 2Q - 6 \\ 4 + 6 &= 2Q - 6 + 6 \\ 10 &= 2Q \\ 10 \div 2 &= 2Q \div 2 \\ 5 &= Q \end{aligned}$$

$$\begin{aligned} 8) \quad 2R + 8 &= 3R - 2 \\ 2R - 2R + 8 &= 3R - 2R - 2 \\ 8 &= R - 2 \\ 8 + 2 &= R - 2 + 2 \\ 10 &= R \end{aligned}$$

$$\begin{aligned} 9) \quad 9 - 3 &< |4 - 11| \\ 6 & \quad | -7 | \\ 6 & < 7 \end{aligned}$$

$$\begin{aligned} 10) \quad |1 - 2 - 3| &< |2 \times 3| \\ | -4 | & \quad | 6 | \\ 4 & < 6 \end{aligned}$$

$$\begin{aligned} 11) \quad (-3) \times 4 + 6^2 \times (-3) + 5^2 &= \\ -3 \times 4 + 36 \times (-3) + 25 &= \\ -12 + (-108) + 25 &= -120 + 25 = -95 \end{aligned}$$

$$\begin{aligned} 12) \quad 14 - 9 + 2^2 - (3 \div 6 \times 2^2) &= \\ (14 - 9 + 4) - (3 \div 6 \times 4) &= \\ 9 - (3/6 \times 4) = 9 - (1/2 \times 4) &= 9 - 2 = 7 \end{aligned}$$

$$\begin{aligned} 13) \quad \frac{4}{3} \times \frac{6}{10} \div \frac{2}{3} &= \\ \frac{2}{1} \times \frac{3}{5} \times \frac{3}{2} &= \frac{6}{5} = 1 \frac{1}{5} \end{aligned}$$

$$\begin{aligned} 14) \quad &\begin{array}{r} .17 \\ .8 \\ \hline 5 \\ 86 \end{array} \\ &.136 \text{ (three decimal places in answer)} \end{aligned}$$

$$15) \quad (-8)(-7) = 56$$

$$16) \quad (-4)^2 = (-4)(-4) = 16$$

$$17) \quad 2=2, 3=3, 4=2 \times 2, \text{ so LCM} = 2 \times 2 \times 3 = 12$$

$$\begin{aligned} \frac{1}{2} + \frac{2}{3} &= \frac{1}{1} \times \frac{3}{3} + \frac{2}{2} \times \frac{3}{3} = \frac{3}{3} + \frac{4}{3} = \frac{7}{3} \\ \text{(It is not necessary to write in "1" when dividing terms unless you wish.)} \\ 6 + 8 &= 3X, \quad X = 4 \frac{2}{3} \end{aligned}$$

$$18) \quad 2, 5, 4 = 2 \times 2, \text{ so LCM} = 2 \times 2 \times 5 = 20$$

$$\begin{aligned} \frac{3}{5} X + \frac{3}{4} &= \frac{3}{2} \\ \frac{3}{5} X &= \frac{3}{2} - \frac{3}{4} = \frac{6}{4} - \frac{3}{4} = \frac{3}{4} \\ 12X + 15 &= 30, \quad X = 1 \frac{1}{4} \end{aligned}$$

$$19) \quad 3, 5, 9 = 3 \times 3, \text{ so LCM} = 3 \times 3 \times 5 = 45$$

$$\begin{aligned} \frac{1}{3} X + \frac{2}{5} &= \frac{1}{9} \\ \frac{1}{3} X &= \frac{1}{9} - \frac{2}{5} = \frac{5}{45} - \frac{18}{45} = -\frac{13}{45} \\ 5X + 30 &= 9, \quad X = -4 \frac{1}{5} \end{aligned}$$

$$20) \quad 4, 4 = 2 \times 2, 8 = 2 \times 2 \times 2, \text{ so LCM} = 2 \times 2 \times 2 \times 5 = 40$$

$$\begin{aligned} \frac{3}{8} - \frac{1}{5} X &= \frac{3}{4} \\ \frac{3}{8} &= \frac{3}{4} + \frac{1}{5} X \\ -8X &= 15, \quad X = -1 \frac{7}{8} \end{aligned}$$

3D

$$\begin{aligned} 1) \quad Y - 3 &= 10 \\ Y - 3 + 3 &= 10 + 3 \\ Y &= 13 \end{aligned}$$

$$\begin{aligned} 2) \quad 2B - 5 &= 13 \\ 2B &= 18 \\ 2B \div 2 &= 18 \div 2 \\ B &= 9 \end{aligned}$$

$$\begin{aligned} 3) \quad 3C + 6 &= -9 \\ 3C &= -15 \\ 3C \div 3 &= -15 \div 3 \\ C &= -5 \end{aligned}$$

$$\begin{aligned} 4) \quad 2D - 5 &= 1 \\ 2D &= 6 \\ 2D \div 2 &= 6 \div 2 \\ D &= 3 \end{aligned}$$

$$\begin{aligned} 5) \quad 4E - 3 &= -3 \\ 4E &= 0 \\ E &= 0 \end{aligned}$$

$$\begin{aligned} 6) \quad 3X + 8 &= -2X - 2 \\ 3X + 2X &= -2X + 2X - 10 \\ 5X &= -10 \\ 5X \div 5 &= -10 \div 5 \\ X &= -2 \end{aligned}$$

$$\begin{aligned} 7) \quad 2Y - 2 &= 3Y - 6 \\ 2Y - 3Y &= -6 + 2 \\ -Y &= -4 \\ (-1)(-Y) &= (-1)(-4) \\ Y &= 4 \end{aligned}$$

$$\begin{aligned} 8) \quad Z + 8 &= 2Z + 18 \\ Z - 2Z &= 18 - 8 \\ -Z &= 10 \\ Z &= -10 \end{aligned}$$

$$\begin{aligned} 9) \quad |3 \times 2 \times (-2)| &> 24 \div (-3) \\ |-12| & \quad -8 \\ 12 & > -8 \end{aligned}$$

$$\begin{aligned} 10) \quad |17 - 3 - 20| &< |7 + 0 + 1| \\ |-6| & \quad |8| \\ 6 & < 8 \end{aligned}$$

$$\begin{aligned} 11) \quad [(6 - 2) \times 5^2 - 10] \div 5^2 &= \\ [4 \times 25 - 10] \div 25 &= \\ [100 - 10] \div 25 &= 90 \div 25 = 3 \frac{3}{5} \text{ or } 3.6 \end{aligned}$$

$$\begin{aligned} 12) \quad (-7 - 6)^2 - (4 + 5 - 3)^2 &= \\ (-13)^2 - 6^2 &= 169 - 36 = 133 \end{aligned}$$

$$\begin{aligned} 13) \quad \frac{5}{6} \times \frac{3}{7} \div \frac{2}{3} &= \\ \frac{5}{6} \times \frac{3}{7} \times \frac{3}{2} &= \frac{15}{28} \end{aligned}$$

$$\begin{array}{r} 14) \quad \begin{array}{r} 14. \\ 1.2 \overline{) 1.68} \\ \underline{12} \\ 48 \\ \underline{48} \end{array} \end{array}$$

$$15) \quad 2 = 2, 5 = 5, 10 = 2 \times 5, \text{ so LCM} = 2 \times 5 = 10$$

$$\begin{aligned} 16) \quad \frac{6}{8} X + \frac{7}{10} &= \frac{5}{2} \\ 12X + 7 &= 25X, \quad X = 7/13 \end{aligned}$$

$$\begin{aligned} 17) \quad 100 &= 10 \times 10, 1000 = 10 \times 10 \times 10 \\ \text{LCM} &= 10 \times 10 \times 10 = 1000 \\ 1000(.83) + 1000(.04X) &= 1000(.325) \\ 830 + 40X &= 325 \\ 40X &= -505, \quad X = -12.625 \text{ or } -12 \frac{5}{8} \end{aligned}$$

$$\begin{aligned} 18) \quad 10 &= 10, 100 = 10 \times 10 \\ \text{LCM} &= 10 \times 10 = 100 \\ 100(.18) + 100(.2X) &= 100(.17) \\ 18 + 20X &= 17 \\ 20X &= -1, \quad X = -.05 \text{ or } -1/20 \end{aligned}$$

$$\begin{aligned} 19) \quad 10 &= 10, 100 = 10 \times 10 \\ \text{LCM} &= 10 \times 10 = 100 \\ 100(.8X) + 100(1.3) &= 100(7) + 100(.24) \\ 80X + 130 &= 700 + 24 \\ 80X &= 594, \quad X = 7.425 \text{ or } 7 \frac{17}{40} \end{aligned}$$

$$\begin{aligned} 20) \quad 10 &= 10, 100 = 10 \times 10 \\ \text{LCM} &= 10 \times 10 = 100 \\ 100(8.2) - 100(4) &= 100(.08X) \\ 820 - 400 &= 8X \\ 420 &= 8X, \quad X = 52.5 \text{ or } 52 \frac{1}{2} \end{aligned}$$