Test 1 solutions

(1) $\frac{p+q}{q}$; $p=4$, $q=2$

$= \frac{4+2}{2} = \frac{6}{2} = \boxed{3}$

(2) area $= b \cdot h$

$= (2ft)(8ft)$

$= \boxed{16 ft^2}$

(3) $\boxed{7 + xy = 22}$

(4) $10+20x+30y+40z$

$= \boxed{10(1+2x+3y+4z)}$

(5) $6 \cdot (3x+y+2)$

$= \boxed{18x+6y+12}$

(6) $50 = 2 \cdot 25$

$\uparrow 5$

$= \boxed{2 \cdot 5 \cdot 5}$

(7) $\frac{1}{2} + \frac{3}{4} = \frac{1}{2} \cdot \frac{2}{2} + \frac{3}{4}$

$= \frac{2}{4} + \frac{3}{4} = \boxed{\frac{5}{4}}$

(8) $\frac{2}{3} \div \frac{7}{10} = \frac{2}{3} \cdot \frac{10}{7}$

$= \boxed{\frac{20}{21}}$

(9) $|5467| < 1$ FALSE

SINCE $5467 < 1$ is False

(10) $111 + (-132)$

$= -(132-111) = \boxed{-21}$

(11) $36 + (-14) + (-19) + 36$ (−33)

(72)

$= 72 + (-33) = \boxed{+39}$

(12) -98.1 since $98.1 + (-98.1)$

$= 0$

(13.) $-15-(-14)$

$= -15+14 = -(15-14)$

$= \boxed{-1}$

(14.) $2-(-100) = 2+100$

$= \boxed{102}$

(10.) 2 MINUS SIGNS:

$-(-x) = \boxed{-5.5}$

WHEN $x = -5.5$

-5.5 = ORIGINAL #

(17) $(-3)\cdot(-24)\cdot(-1000)\cdot(-1)\cdot(-1)$ ← 3 ZEROS

$= \boxed{-72000}$ 3 ZEROS

(15.)

$-5y-(-3x)+9x-(-1)-2y-(-9)$

$= -5y+3x+9x+1+(-2y)+9$

$= -7y+12x+10$

$= \boxed{12x-7y+10}$

(18.) $\left(-\frac{7}{4}\right)\cdot\left(-\frac{3}{5}\right)\cdot\left(-\frac{1}{2}\right)$

$= -\frac{7\cdot 3\cdot 1}{4\cdot 5\cdot 2}$

$= \boxed{-\frac{21}{40}}$

(19.) $\frac{1}{98.1}$ SINCE $98.1\cdot\frac{1}{98.1}=1$

(20.) $\frac{2}{3}$ SINCE $\frac{3}{2}\cdot\frac{2}{3}=1$

(24.) $\left(\frac{4}{7}\right)-\left(-\frac{2}{7}\right)$

$= \frac{4}{7}+\frac{2}{7} = \boxed{\frac{6}{7}}$

(22.) $3-20+2\cdot 17$

$= 3-20+34$

$= -17+34 = \boxed{17}$

(23.) $3^2+4^2-15\div 3$

$=9+16-15\div 3$

$=9+16-5$

$= 25-5 = \boxed{20}$

see below.

(24.)

$3^2+4^2\div 2\cdot(-2)^2$ SIMPLIFY THIS.

use Remdas

$= 3^2+4^2\div 2\cdot(-2)^2$ Exp.

$3^2+4^2\div 2\cdot 4$ Exp.

$9+16\div 2\cdot 4$

$9+8\cdot 4$ → Division

$9+32 = 41$ MULT. and ADDITION

(25) $-6+X=21$

$X = \boxed{27}$

(26) $\frac{Y}{3}=\frac{2}{7}$

$3\cdot\left(\frac{Y}{3}\right)=3\cdot\frac{2}{7}$

$\boxed{Y=\frac{6}{7}}$

(27.) $7X-8=27$

$+8 \quad +8$

$7X = 35$

$\boxed{X=5}$

(28.) $2\cdot(3+4X)-5=17$

$6+8X-5=17$

$1+8X=17$

$8X=16$

$\boxed{X=2}$

(29) $N=2W-2L$

$+2L \qquad +2L$

$N+2L=2W$

$\boxed{\frac{N+2L}{2}} = W = \boxed{\frac{N}{2}+L}$

(30.) h: $W = \frac{1}{4}ah + \frac{1}{4}bh$

$4W = ah + bh$

$4W = (a+b)h$

$\frac{4W}{(a+b)} = h$

(31.) for m:

$n = y + 5 \cdot (x + m)$

$n = y + 5x + 5m$

$-y \quad -y$

$n - y = 5x + 5m$

$n - y - 5x = 5x + 5m - 5x$

(31)

$n - y - 5x = 5m$

$\frac{n - y - 5x}{5} = m$

(32.) $6 = n \cdot 24$

$\frac{6}{24} = n$

0.25

$24 \overline{)6.00}$

$-48\downarrow$

120

120

$0.25 = n$

$25\% = n$

(33.) $x = (0.20) \cdot 40$

$= 8$

(34.) (B)

$P = 2\cdot(L+W)$

$36 = 2\cdot(L+L-2)$

$36 = 2\cdot(2L-2)$

$36 = 4L-4$

$40 = 4L$

$10 = L$

$W = L-2 = 8$

Check:

$36 = 2\cdot(10+8)$

$36 = 2\cdot 18$

$36 = 36$

EXTRA credit:

(35.) $W = \frac{1}{4}ah + \frac{1}{4}bh - 52$

$W+52 = \frac{1}{4}ah + \frac{1}{4}bh$

$4\cdot(W+52) = 4\cdot\left[\frac{1}{4}ah + \frac{1}{4}bh\right]$

$= 4(W+52) = ah+bh$ (5)

$4(W+52) = (a+b)h$

$\frac{4(W+52)}{(a+b)} = h$

(36.) $E = \frac{(a+b+c)}{4}$

$4E = a+b+c$

$-a-b \quad -a-b$

$4E-a-b = c$

(37.) $4\cdot(3+4x)-10=34$

$12+16x-10=34$

$2+16x=34$

$16x=32$

$x=2$

(38.) $19-(2x+3)=2\cdot(x+3)+x$

$19-2x-3=2x+6+x$

$16-2x=3x+6$

$10=5x$

$2=x$