

DIRECTED NUMBERS

Form 1 Summer Course

Vol 1 - CH1

Part 4 – Mixed Type

1. (a) $(-4) - (-2) \times (-6)$
 $= (-4) - (+12)$
 $= -4 - 12$
 $= -16$
- (b) $(+5) \times 0 + (-20) \div (-4)$
 $= 5$
- (c) $(+5)(+3) - (-9)(+2)$
 $= 15 - (-18)$
 $= 15 + 18$
 $= 33$
- (d) $(-121) \div (-1.1) + (-7.5) \div 5$
 $= 110 + (-1.5)$
 $= 110 - 1.5$
 $= 108.5$
- (e) $[(-3) \times (-5) + (+6)] \div (-7)$
 $= [15 + 6] \div (-7)$
 $= 21 \div (-7)$
 $= -3$
- (f) $[(-7) + (+6) \div (-2)] \times (+3)$
 $= [(-7) + (-3)] \times (+3)$
 $= (-10) \times (+3)$
 $= -30$
- (g) $[(-12) \times (+2) - 8] \div [15 + (-3)(+4)]$
 $= [(-24) - 8] \div [15 + (-12)]$
 $= (-32) \div (+3)$
 $= -\frac{32}{3}$

$$\begin{aligned}
 \text{(h)} \quad & \left(-2\frac{2}{3}\right)\left(-\frac{1}{4}-\left(+\frac{1}{8}\right)\right) \\
 & = \left(-2\frac{2}{3}\right)\left(-\frac{2}{8}-\frac{1}{8}\right) \\
 & = \left(-\frac{8}{3}\right)\left(-\frac{3}{8}\right) \\
 & = 1
 \end{aligned}$$

2. (a) T
 (b) F
 (c) F
 (d) F
 (e) T
 (f) F

Part 5 – Word Problem

1. $10 \div (-2 + 2)$
 $= 10 \div 0$

\therefore No solution.

2. $8 \times (-12) \div [(-18) - (-30)]$
 $= 8 \times (-12) \div [-18 + 30]$
 $= 8 \times (-12) \div (+12)$
 $= -8$

3. $[(-16) - (-8)] \div (-48)$
 $= (-16 + 8) \div (-48)$
 $= (-8) \div (-48)$
 $= \frac{1}{6}$

4. $9 - [12 \div (4 + 2)]$
 $= 9 - (12 \div 6)$
 $= 9 - 2$
 $= 7$

5. $[6 + (-3)(-5)] \div (-7)$
 $= (6 + 15) \div (-7)$
 $= 21 \div (-7)$
 $= -3$

$$\begin{aligned}
6. \quad & 3 \div 2 + [2 + (-5)] \div 3 \\
& = 3 \div 2 + (2 - 5) \div 3 \\
& = 3 \div 2 + (-3) \div 3 \\
& = 3 \div 2 + (-1) \\
& = 3 \div 2 - 1 \\
& = \frac{1}{2}
\end{aligned}$$

$$\begin{aligned}
7. \quad & [(-12) + (-8)] \times (-2) \div \frac{1}{4} \\
& = (-12 - 8) \times (-2) \times 4 \\
& = (-20) \times (-2) \times 4 \\
& = 160
\end{aligned}$$

$$\begin{aligned}
8. \quad & (-3)(-5) - 8 \\
& = 15 - 8 \\
& = 7
\end{aligned}$$

$$\begin{aligned}
9. \quad & (6 - 70) - 25 \\
& = -64 - 25 \\
& = -89
\end{aligned}$$

$$\begin{aligned}
10. \quad & -\frac{1}{2} - \left[-\frac{4}{5} - \left(\frac{1}{5} + 8 \right) \right] \\
& = -\frac{1}{2} - \left(-\frac{4}{5} - 8\frac{1}{5} \right) \\
& = -\frac{1}{2} - (-9) \\
& = -\frac{1}{2} + 9 \\
& = 8\frac{1}{2}
\end{aligned}$$