Operations with integers and fractions – Review #1

Name:_____

1. Evaluate without a calculator.

a) $(-1)+(-2) = -3$
b) $(-2)-7 = -9$
c) $6+(+6) = 12$
d) $(-2)+2 = 0$
e) $(-8)+7 = -1$
f) $7+(+2) = 9$
g) $1+(+6) = 7$
h) $(-1)-6 = -7$
i) $(-3)+(-7) = -10$
j) $(-4)+(+2) = -2$
k) $(-4)+(-6) = -10$
l) $5-2 = 3$
m) $(-5)+(-2) = -7$
n) $(-7)+2 = -5$
o) $5+(-2) = 3$
p) $2+(+6) = 8$
q) $(-6)+2 = -4$
r) $4-6 = -2$
s) $7+(-6) = 1$
t) $3-2 = 1$
u) $(-1)+(-7) = -8$
v) $(-6)+(-6) = -12$
w) $(-3)+2 = -1$
x) $2-7 = -5$
y) $6+(+5) = 11$
z) $2+(-1) = 1$
aa) $(-3)+(+2) = -1$
bb) $(-5)-2 = -7$
cc) $(-7)+(+6) = -1$
dd) $(-5)-2 = -7$
ee) $1+(+7) = 8$
ff) $(-5)+7 = 2$
gg) $4+(+2) = 6$

2. Evaluate without a calculator. Show your work

a) $20 \div 5+3$
$= 4+3$
$= 7$

b) $15-4\times 2$
$= 15-8$
$= 7$

c) $4\times 7-10$
$= 28-10$
$= 18$

d) $(7-5)\times 3$
$= 2\times 3$
$= 6$

e) $12 \div (4-1)$
$= 12 \div 3$
$= 4$

f) $4\times(10-7)$
$= 4\times(3)$
$= 12$

g) $8\times 7-4\times 3$
$= 56-12$
$= 44$

h) $15-(3+2)\times 3$
$= 15-(5)\times 3$
$= 15-15$
$= 0$

i) $(2-3)\times 8+9$
$= (-1)\times 8+9$
$= -8+9$
$= 1$

j) 10^2-25
$= 100-25$
$= 75$

k) $12+5^2-36$
$= 12+25-36$
$= 37-36$
$= 1$

l) $2^3+5\times 4$
$= 8+20$
$= 28$

m) 6^2+5-3^2
$= 36+5-9$
$= 41-9$
$= 32$

n) $4^2\times 2-15$
$= 16\times 2-15$
$= 32-15$
$= 17$

o) $2^2\times(13-5)$
$= 4\times 8$
$= 32$

p) $8-2^3$
$= 8-8$
$= 0$

q) $(8-2)^3$
$= 6^3$
$= 216$

r) $(9-2)^2+2$
$= 7^2+2$
$= 49+2$
$= 51$

s) $14-36 \div 2^2$
$= 14-36 \div 4$
$= 14-9$
$= 5$

t) $3\times(5^2-4^2)$
$= 3\times(25-16)$
$= 3\times 9$
$= 27$

u) $3^2\times(8+1)\div 3$
$= 9\times 9 \div 3$
$= 81 \div 3$
$= 27$

3. Evaluate each expression. Simplify if necessary.

a) $\frac{7}{4}\times\frac{1}{3} = \frac{7}{12}$

b) $\frac{2}{1}\times\frac{1}{2} = \frac{2}{2} = 1$

c) $\frac{4}{3}\times\frac{2}{3} = \frac{8}{9}$

d) $\frac{1}{5}\times\frac{4}{3} = \frac{4}{15}$

e) $\frac{5}{6}\times\frac{3}{4} = \frac{15}{24} = \frac{5}{8}$

f) $\frac{3}{4}\times\frac{1}{6} = \frac{3}{24} = \frac{1}{8}$

g) $\frac{8}{5}\div\frac{4}{5}$ $\frac{8}{5}\times\frac{5}{4} = \frac{40}{20} = 2$

h) $\frac{1}{2}\times\frac{8}{1} = \frac{8}{2} = 4$

i) $\frac{5}{6}\div\frac{1}{4} = \frac{5}{6}\times\frac{4}{1} = \frac{20}{6} = \frac{10}{3}$

j) $\frac{3}{2}\div\frac{3}{4} = \frac{3}{2}\times\frac{4}{3} = \frac{12}{6} = 2$

k) $\frac{7}{9}\times\frac{5}{7} = \frac{35}{63} = \frac{5}{9}$

l) $\frac{2}{3}\div\frac{3}{8} = \frac{2}{3}\times\frac{8}{3} = \frac{16}{9}$

m) $\frac{2}{3}\div\frac{4}{1} = \frac{2}{3}\times\frac{1}{4} = \frac{2}{12} = \frac{1}{6}$

n) $\frac{7}{8}-\frac{3}{8} = \frac{4}{8} = \frac{1}{2}$

o) $\frac{2}{3}-\frac{1}{6} = \frac{2(2)}{3(2)} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$

p) $\frac{3}{2}+\frac{5}{4} = \frac{3(2)}{2(2)} + \frac{5}{4} = \frac{6}{4} + \frac{5}{4} = \frac{11}{4}$

q) $\frac{4}{5}-\frac{1}{4} = \frac{4(4)}{5(4)} - \frac{1(5)}{4(5)} = \frac{16}{20} - \frac{5}{20} = \frac{11}{20}$

r) $\frac{1}{2}+\frac{9}{5} = \frac{1(5)}{2(5)} + \frac{9(2)}{5(2)} = \frac{5}{10} + \frac{18}{10} = \frac{23}{10}$

s) $\frac{4}{5}+\frac{5}{4} = \frac{4(4)}{5(4)} + \frac{5(5)}{4(5)} = \frac{16}{20} + \frac{25}{20} = \frac{41}{20}$

t) $\frac{2}{3}+\frac{2}{5} = \frac{2(5)}{3(5)} + \frac{2(3)}{5(3)} = \frac{10}{15} + \frac{6}{15} = \frac{16}{15}$

u) $3-\frac{1}{3} = \frac{3(3)}{1(3)} - \frac{1}{3} = \frac{9}{3} - \frac{1}{3} = 8/3$

v) $2-\frac{6}{5} = \frac{2(5)}{1(5)} - \frac{6}{5} = \frac{10}{5} - \frac{6}{5} = \frac{4}{5}$

w) $\frac{1}{6}+\frac{5}{6} = \frac{6}{6} = 1$

x) $\frac{1}{4}+\frac{1}{2} = \frac{1}{4} + \frac{1(2)}{2(2)} = \frac{1}{4} + \frac{2}{4} = 3/4$