

# Test Solutions

## Test 1

1. have
2. owe
3. owe
4.  $(+8) + (-7) = +1$
5.  $(-10) + (-2) = -12$
6.  $(-7) + (-15) = -22$
7.  $(+9) + (-11) = -2$
8.  $(+32) + (+96) = +128$
9.  $(+4) + (-13) = -9$
10.  $(-5) + (-18) = -23$
11.  $(-436) + (-251) = -687$
12.  $(-511) + (+709) = +198$
13.  $10 \div 5 = 2$   
 $2 \times 1 = 2$
14.  $9 \div 3 = 3$   
 $3 \times 2 = 6$
15.  $32 \div 8 = 4$   
 $4 \times 7 = 28$
16.  $30 \div 2 = 15$   
 $15 \times 1 = 15$
17.  $(+25) + (-17) = +8$  paces
18.  $(-R5) + (-R6) = -R11$
19.  $20 \div 5 = 4$   
 $4 \times 4 = 16$  won prizes
20.  $254 \div 2 = 127$  pages read

## Test 2

1.  $(+52) - (-23) =$   
 $(+52) + (+23) = +75$
2.  $(-35) - (-16) =$   
 $(-35) + (+16) = -19$
3.  $(+54) - (+15) =$   
 $(+54) + (-15) = +39$
4.  $(-7) - (+24) =$   
 $(-7) + (-24) = -31$
5.  $(-36) - (+49) =$   
 $(-36) + (-49) = -85$
6.  $(+22) - (-30) =$   
 $(+22) + (+30) = +52$
7.  $(+30) + (-24) = +6$

8.  $(-53) - (+10) =$   
 $(-53) + (-10) = -63$
9.  $(+13) + (-2) = +11$
10.  $(-33) - (+2) =$   
 $(-33) + (-2) = -35$
11.  $(-7) + (+1) = -6$
12.  $(-4) - (+18) =$   
 $(-4) + (-18) = -22$
13.  $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$
14.  $\frac{2}{8} - \frac{1}{8} = \frac{1}{8}$
15.  $\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$
16.  $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$
17.  $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$  of the cake
18.  $15 \div 3 = 5$   
 $15 - 5 = 10$  coins
19.  $R21 - R25 = -R4$
20.  $(+46) + (-15) = +31$  coins

## Test 3

1.  $(-20) \times (-4) = +80$
2.  $(+19) \times (-3) = -57$
3.  $(-30) \times (-17) = +510$
4.  $(-27) \times (+8) = -216$
5.  $(-9) \times (+2) = -18$
6.  $(-7) \times (-29) = +203$
7.  $(+33) - (-46) =$   
 $(+33) + (+46) = +79$
8.  $(-27) + (-10) = -37$
9.  $(-41) - (-20) =$   
 $(-41) + (+20) = -21$
10.  $24 \div 3 = 8$   
 $8 \times 1 = 8$
11.  $15 \div 5 = 3$   
 $3 \times 2 = 6$
12.  $28 \div 7 = 4$   
 $4 \times 3 = 12$
13.  $\frac{5}{8} - \frac{3}{8} = \frac{2}{8}$

14.  $\frac{7}{10} - \frac{1}{10} = \frac{6}{10}$
15.  $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$
16.  $\frac{1}{5} = \frac{2}{10} = \frac{3}{15} = \frac{4}{20}$
17.  $\frac{2}{3} = \frac{4}{6} = \frac{6}{9} = \frac{8}{12}$
18.  $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$  of the chores
19.  $-R4 \times (+5) = -R20$
20.  $(-2) \times (+6) = -12$  m

#### Test 4

1.  $\frac{-6}{-2} = +3$
2.  $35 \div (-7) = -5$
3.  $(-48) \div (-6) = +8$
4.  $\frac{-28}{-4} = +7$
5.  $26 \div (-2) = -13$
6.  $(-56) \div 7 = -8$
7.  $(-3) \times (+6) = -18$
8.  $(+4) \times (-2) = -8$
9.  $(-5) \times (-6) = +30$
10.  $(-38) + (+12) = -26$
11.  $(+47) + (-39) = +8$
12.  $(-21) - (-45) =$   
 $(-21) + (+45) = +24$
13.  $\frac{1}{8} + \frac{3}{8} = \frac{4}{8} = \frac{1}{2}$
14.  $\frac{4}{10} + \frac{4}{10} = \frac{8}{10} = \frac{4}{5}$
15.  $\frac{7}{8} - \frac{1}{8} = \frac{6}{8} = \frac{3}{4}$
16.  $D = 6$
17. No, whole numbers are non-negative.  
yes
18.  $20 \div 5 = 4$   
 $4 \times 4 = 16$  right
19.  $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$  were either sandpipers  
or gulls
20.  $-R500 \div 10 = -R50$  per person

#### Test 5

1.  $5^2 = (5)(5) = 25$
2.  $1^6 = (1)(1)(1)(1)(1)(1) = 1$
3.  $3^3 = (3)(3)(3) = 27$
4.  $\left(\frac{1}{2}\right)^4 = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{16}$
5. 4
6. 3
7. 5
8. 5
9. 3
10. 2
11.  $\frac{1}{3} = \frac{7}{21}$
12.  $\frac{3}{4} = \frac{12}{16}$
13.  $\frac{7}{10} = \frac{14}{20}$
14.  $\frac{1}{3} = \frac{8}{24}$ ;  $\frac{3}{8} = \frac{9}{24}$ ;  $\frac{8}{24} < \frac{9}{24}$
15.  $\frac{2}{5} = \frac{14}{35}$ ;  $\frac{4}{7} = \frac{20}{35}$ ;  $\frac{14}{35} < \frac{20}{35}$
16.  $\frac{3}{4} = \frac{27}{36}$ ;  $\frac{5}{9} = \frac{20}{36}$ ;  $\frac{27}{36} > \frac{20}{36}$
17.  $3 \times 3 \times 3 \times 3$ ;  $3^4$ ; 81
18.  $12 \div 4 = 3$   
 $3 \times 3 = 9$  pencils given away  
 $12 - 9 = 3$  pencils left
19.  $-R63 \div 7 = -R9$
20.  $-R12 + -R7 = -R19$

#### Test 6

1.  $2 \times 10^0 + 2 \times \frac{1}{10^1} + 4 \times \frac{1}{10^2} + 7 \times \frac{1}{10^3}$
2.  $1 \times 10^2 + 5 \times 10^1 + 6 \times 10^0 + 3 \times \frac{1}{10^1}$
3.  $3 \times 10^3 + 9 \times 10^2 + 1 \times 10^1$
4.  $7 \times 10^1 + 8 \times 10^0 + 9 \times \frac{1}{10^2}$
5. 5417,412
6. 400,13
7.  $4.00 + .00 + .02 = R4.02$
8.  $8.00 + .10 + .05 = R8.15$
9. 3
10. 2
11.  $(-33) + (-22) = -55$
12.  $(-26)(10) = -260$
13.  $(91) \div (-13) = -7$