Assessment # 1- **Algebra Readiness Assessment (Sample problems)**

This is a sample of <u>some</u> of the types of problems you will find on the Algebra Readiness assessment given on the specific Assessment dates. The actual assessment consists of 50 questions –you will have 45 minutes and will not be allowed to use a calculator. <u>Print</u> this assessment and try the problems, without a calculator, giving yourself about 25 minutes. The answer key is at the end of the example assessment.

1) Give the value of $\sqrt{36}$

$a)36$

$b)\sqrt{6}$

$c)6$

$d)\dfrac{1}{6}$

$e)-6$

2) Evaluate: $5+4(2-5)^2+3$

$a)44$

$b)108$

$c)84$

$d)-28$

3) Write the number 18 million is scientific notation.

$a)18\times10^6$

$b)1.8\times10^6$

$c)1.8\times10^7$

$d)18{,}000{,}000$

4) Which expression is equivalent to x^5 ?

$a)x+x+x+x+x$

$b)x\bullet x\bullet 3x$

$c)x\bullet x^4$

$d)x^2+x^3$

5) Evaluate the following: $\dfrac{4-2(8-6)}{7-10}$

$a)-4$

$b)0$

$c)undefined$

$d)4$

6) Divide: $\dfrac{9}{20} \div \dfrac{3}{25}$

a) $\dfrac{3}{4}$

b) $\dfrac{5}{4}$

c) $\dfrac{15}{4}$

d) $\dfrac{3}{5}$

7) The temperature was 15^0 centigrade at noon. At 7pm, the temperature was 5^0 below zero. How much did the temperature drop between noon and 7pm?

a) 20^0

b) 15^0

c) 10^0

d) 5^0

8) Evaluate: $5.82 - 2.3 + 0.305$

a) 3.805

b) 3.830

c) 3.825

d) 3.800

9) Multiply: $\dfrac{5}{3} \times -6 \times \dfrac{7}{20}$

a) $-\dfrac{7}{2}$

b) $\dfrac{-2}{7}$

c) 3.5

d) $\dfrac{14}{10}$

10) If you are supposed to take three pills twice each day for eight days, how many pills will you take in all?

a) 16

b) 24

c) 18

d) 3

e) 48

11) Evaluate: $8-3+2-5-6$
a) -14

b) 2

c) 12

d) -4

e) 0

12) On the number line fine half the distance between -8 and 6.
a) 7

b) -2

c) -7

d) 2

13) 20% of what number is 80?
a) 1600

b) 16

c) 80

d) 400

14) Which equation below describes the statement: "When a number is decreased by 4 the result is 8"?
a) $x-4=-8$

b) $8=4-x$

c) $x-4+8=0$

d) $4-x=8$

e) $x-4=8$

15) If $10=2a+b$ and $a=4$, find the value of b.
a) 10

b) 8

c) -2

d) 0

e) 2

16) Simplify: $\dfrac{10xy}{5x^2}$
a) $\dfrac{2y}{x}$

b) y

c) $\dfrac{5y}{x}$

d) $\dfrac{2y}{5}$

17) A notebook cost $2.25. The sales tax for the notebook is an additional $0.09. What was the sales tax, as a percentage?

a)4%

b).04%

c).09%

d)20.25%

18) The stock market report says that yesterday five stocks went up for every six stocks that went down. If 450 stocks went down yesterday, how many went up?

a)540

b)30

c)375

d)2250

19) Subtract: $2(\dfrac{3}{10}) - \dfrac{1}{6} =$

a)$\dfrac{-1}{5}$

b)$\dfrac{1}{9}$

c)$\dfrac{13}{30}$

d)-2

20) Evaluate: $6 - 5(6 - 8)^3$

a)-8

b)8

c)46

d)-34

21) The prime factorization of 90 is

a)$9 \bullet 10$

b)$2 \bullet 3 \bullet 3 \bullet 5$

c)$2 \bullet 3 \bullet 5$

d)$3 \bullet 30$

22) Add: $\dfrac{1}{4}+\dfrac{2}{3}$

a) $\dfrac{3}{12}$

b) $\dfrac{11}{12}$

c) $\dfrac{3}{7}$

d) $\dfrac{4}{7}$

23) Add: $\dfrac{2}{5}+1.2$

a) $\dfrac{8}{5}$

b) $\dfrac{14}{5}$

c) $\dfrac{3}{10}$

d) $\dfrac{62}{5}$

24) A certain pair of shoes normally sells for $120, but is now on sale for $90. What is the percent decrease from the normal price to the sale price?

a) 30%

b) 33%

c) 25%

d) 75%

25) What is the radius of a circle whose circumference is 16π ?

a) 8

b) 4π

c) 2π

d) 4

How did you do?
Answer Key:

1) c	9)a	17)a	25)a
2) a	10)e	18)c	
3) c	11)d	19)c	
4) c	12)a	20)c	
5) b	13)d	21)b	
6) c	14)e	22)b	
7) a	15)e	23)a	
8) c	16)a	24)c	