

## ASVAB Cram Sheet

- If you have problems with multiplication, practice making a **MULTIPLICATION CHART** and make one before starting the ASVAB test. You cannot bring anything into the test with you, but you can make the chart yourself before the time begins.

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

### 1. Multiplying tricks:

- a. 2 – answer is even
- b. 3 – both the numbers in the answer add up to 3, 6, or 9 (15, 24, 36)
- c. 5- The answer ends in either 5 or 0 (5, 10, 15, 20)
- d. 6- if you multiply 6 by an even number, they both end in the same digit. Example:  $6 \times 2 = 12$ ,  $6 \times 4 = 24$ ,  $6 \times 6 = 36$ , etc
- e. 9- both the numbers in the answers add up to 9 (18, 27, 36)

### 2. FRACTIONS

- a. Adding and Subtracting Fractions – bottom number the same
- b. Multiplying Fractions – multiply the top then multiply the bottom
- c. Dividing Fractions – second number turn upside down the multiply

3.  $5!$  (5 factoid) =  $5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120$

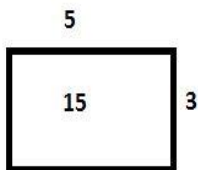
a.  $3! = 3 \cdot 2 \cdot 1 = 6$

4.  $X^2 + 10X + 25 = (X+5)(X+5)$

- Look at equation with two parenthesis ( ) ( ), and the two numbers should multiply together to be the number in the other equation with the  $X^2$  ...  $5 \cdot 5 = 25$
- Look at two numbers in parenthesis, ( ) ( ), they should add up and equal the middle number without the parenthesis.  $5 + 5 = 10$

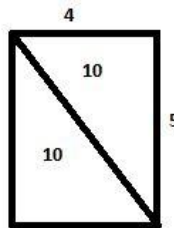
5. If answer has % then DIVIDE, ( $\% = \div$ ), Big number on the outside and small number on the inside of equation  $\frac{3}{4} = 3 \div 4 = .75 = 75\%$ , if question has % then multiply.

### 6. Area Perimeter

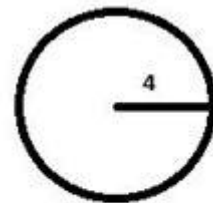
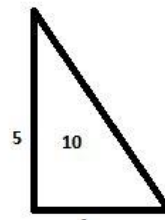


$5 \times 3 = 15$   
 $5 + 5 + 3 + 3 = 16$

Area = 15  
 Perimeter = 16

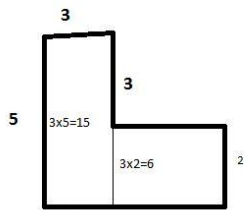
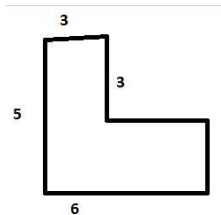


Area of triangle =  $\frac{\text{height} \times \text{width}}{2}$

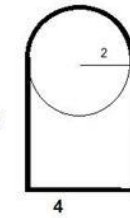


$\pi r^2 = 16\pi$

#### a. Irregular shapes – break down to regular shapes.



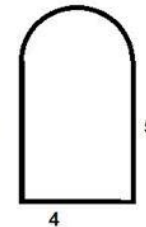
$15 + 6 = 21$  Area = 21  
 $5 + 3 + 3 + 3 + 2 + 6 = 17$  Perimeter = 17



$\pi r^2 = 4\pi$ , half a circle is  $2\pi$  rectangle = 20



$4 \times 5 = 20$



AREA =  $20 + 2\pi$