1. Multiply (2-5x⁷)² =\_\_\_\_\_
2. The base of a triangle is 4 cm greater than the height. The area is 30 cm². Find the height and length of the base.

Height is \_\_\_\_\_\_\_\_cm

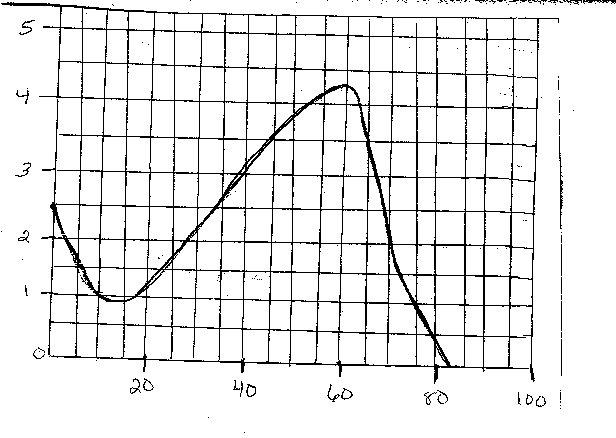
Base is \_\_\_\_\_\_\_\_\_cm

1. (y²-7) (6y²-3y+5) =\_\_\_\_\_\_\_
2. Find the greatest common factor (GCF) of 12x and 14x³ The GCF is\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Solve w² = 25
4. The solution is\_\_\_\_\_\_\_
5. There is no solution.
6. The number N, in millions, of hearing impaired people of age x can be approximated by

N = -0.00006x³ + 0.006x² -0.1x + 1.5. Approximate to the nearest million the number of hearing impaired people of age 25 and 35.

N = \_\_\_\_\_\_\_\_million people of age 25 (round to the nearest million as needed)

N =\_\_\_\_\_\_\_\_\_million people of age 35 (round to the nearest million as needed)



1. Simplify (7⁸) -⁵ =\_\_\_\_\_
2. Divide (16x³ -34x² -71 x -21) \div \!\,(8x + 3)=\_\_\_\_\_\_\_\_
3. Factor the trinomial r² + 9r +20 =\_\_\_\_\_\_
4. Subtract (xy – ab -8) –(xy – 8ab -1) =\_\_\_\_\_\_\_\_\_
5. 14x⁸ -42x⁷ + 35x³ \_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_

-7x³

12. Suppose it takes 3 days for a space vehicle to travel from earth to the moon. About how long would it take the same vehicle traveling at the same speed to reach Venus? Closest distance from earth to : moon: 240,000 mi Venus: 26,000,000 mi

The space vehicle would take about \_\_\_\_\_\_\_\_\_days to reach venus. (round to the nearest whole number. Use scientific notation.)

13 Simplify (4m⁴)³ =\_\_\_\_\_\_\_

14 For the polynomial, -3x⁴ +7x³ -4x² +5x -1, complete the table

Term coefficient degree of the term degree of the polynomial

\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_\_

7x³ 7 \_\_\_\_\_\_\_\_

\_\_\_\_ \_\_\_\_\_\_ 2

5x \_\_\_\_\_\_ 1

-1 \_\_\_\_\_\_ \_\_\_\_\_\_\_

15 Solve c² -14c +45 =0

1. The solution is\_\_\_\_\_
2. There is no solution

16 Simplify

1. 3² =\_\_\_\_
2. 3-² =\_\_\_\_\_\_
3. ( 1/3)² =\_\_\_\_\_\_
4. (1/3)-²=\_\_\_\_\_
5. -3²=\_\_\_\_\_\_
6. (-3)²=\_\_\_\_\_\_

17 Convert to decimal notation. 10-⁴=\_\_\_\_\_\_

18 factor completely v² +36 -12v =\_\_\_\_\_

19 evaluate n² -8 when n=-11. n² -8=\_\_\_\_\_

20 collect like terms. 7x -9x =\_\_\_\_\_ -

21 factor. 4x² +32x

22 divide and check answer

30x⁴ y² \_\_\_\_\_\_\_\_

6x ^6 y²

23 multiply and simplify ( 3h )^6 x (3h)³ =\_\_\_\_\_\_

24 factor 3s⁵-192s² =\_\_\_\_\_

25 add (8x² -7x +25) + (7x² + 9x -48) =\_\_\_\_\_\_

27 multiply (x = 3) (x – 3)=\_\_\_\_\_\_\_

28 divide and simply 3^19/3^5 =\_\_\_\_\_\_

31 multiply (9x² +4) (9x² -4) =\_\_\_\_\_\_\_

32 subtract (1/10x³ -1/4x -1/9) –(-1/10x³ +1/4x -1/9) =\_\_\_\_\_\_\_\_

33 Add (r -3s +1)+(4r + 2s) + (s +1)=\_\_\_\_\_\_\_\_

34 multiply (-1/6x⁵) (-1/5x)=\_\_\_\_\_\_\_

36 express using a positive exponent 1/z^-3=\_\_\_\_\_

37 Factor by grouping 6x^3 -6x^2 – x + 1=\_\_\_\_\_\_\_\_