1	C
2	C
3	D
4	B
5	C
6	D
7	D
8	A
9	B
10	B
11	C
12	B
13	C
14	D
15	A
16	C
17	D

18) $2a-2b$ - is a monomial - It's element are raised to power 1

j^3k - it is a polynomial - The elements have power that is more than one

P^2_{r2} - is a polynomial - Have element, with power more than 1

11 - is a monomial - Since its a whole number

19 $\sqrt{279} = 279^{\frac{1}{2}}$ $\quad 19\sqrt{x} = \sqrt{19}\, x^{\frac{1}{2}}$

$(8x)^{\frac{1}{2}} = \sqrt{8x}$ $\quad 33gh^{\frac{1}{2}} = \sqrt{33gh}$

20 A) $y = a(1+r)^t$

y = Population

t = number of years since 2010

a = initial value.

r = rate of change

$a = 8,192,426$

$r = 0.9\% = 0.900 = 0.009$

$y = 8,192,426(1+0.009)^t$

$y = 8,192,426(1.009)^t$

B) Value of t.

$t = 2025 - 2010 = 15$ years

Substitute the value of t in the equation.

$y = 8,192,426(1.009)^{15} = 9,370,872.$

$= 9,370,872$ People.

21 Geometric Sequence 3584, 896, 224.

Find sixth term

$a_n = a_1 r^{n-1}$

$a_n = 3584(1/4)^{n-1}$

$r = 1/4.$

$3584(1/4)^5 = 3.5$

22 y-intercept = X-axis
D: all real numbers
R: $y \mid y > 0$

23 $a_1 = 4$
$a_2 = 1$
$a_3 = 1/4$
$a_4 = 1/16$.

$a_1 = 4$
$r = 1/4$

$a_n = a_1 r^{n-1}$

We use a_{n-1} and a_n

~~$a_n = a_{n-1} +$~~

$$a_n = 4(1/4)^{n-1} = \underline{\underline{(1/4)^{n-2}}}$$

24 A) $(4x y^3)(3x^3 y^5)$

$(4x)(3x^3 y^8)$

$(12x^4)(y^8)$

B) $(-18 m^2 n)^2 (-1/16 m n^2)$

$(-18 m^2)^2 (-1/16 m n^4)$

$(9/8 m^5)(n^4)$

25 Simplify

$(\sqrt{8}+\sqrt{12})(\sqrt{48}+\sqrt{18})$

$\sqrt{8}(\sqrt{48}+\sqrt{18})\ \sqrt{12}(\sqrt{48}+\sqrt{18})$

$\sqrt{384}+12+24+\sqrt{216}$.

26 B

27 $\left(\frac{2x^3y^3z}{3x^4yz^{-2}}\right)^{-2}$ Simplify.

$\left(\frac{2x^3\ y^2}{3x4\cdot z^{-3}}\right)^{-2}$.

$=\left(\frac{2x^3y^2}{3x^4z^{-3}}\right)^{-2}$.

28 Solve $4^{3x+4}=16384$

$4^7=16384$

$4^7=4^{3x+4}$.

$x=1$

$4^{3(1)+4}=4^7$ $\quad x=1$

29 a) Value increases by 3.2% Per year.
0.33% Per Month

Value of necklace after 4 years

$PV1, R\ 3.2\%, T\ 10 \cdot fv = 1 \cdot 37 \cdot$

b) Ring B - Has a higher rate of increase than Ring K.

c) 148.5%.

30) $\dfrac{3\sqrt{7}}{1-\sqrt{27}}$

$$\frac{3\sqrt{7}}{1-\sqrt{27}} \cdot \frac{1+\sqrt{27}}{1+\sqrt{27}}$$

$$\frac{3\sqrt{7}+3\sqrt{189}}{1+\sqrt{27}-\sqrt{27}+27}$$

$$\frac{3\sqrt{7}+3\sqrt{189}}{28}$$

$$= \frac{3\sqrt{7}+3\sqrt{189}}{28}$$