Station 3 Work

1. multiply by 3 ∴ create sequence
then add together
$-5+(-15)+(-45)+(-135)+(-405)+(-1215)$
-1820 (C)

$S_n = a_1\left(\frac{1-r^n}{1-r}\right)$

$S_n = -5\left(\frac{1-(3)^6}{1-3}\right)$

$S_n = -1820$

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2. $a_n = a_{n-1}(r) = a_{n-1}\left(\frac{1}{3}\right)$

$a_1 = 1$

$a_2 = 1\left(\frac{1}{3}\right) = \frac{1}{3}$ must be (A)

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3. method 1 find a_{25} can just add 2 until you get to a_{25}.

$S_n = \frac{25}{2}(2+50) = \frac{25}{2}(52) = 25(26) = 650$ (C)

Method 2 make the 25 terms by +2 and add all together

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4. $a_n = a_1 + (n-1)d$

$= 3 + (n-1)(-1)$

$a_n = 4 - n$

$a_{33} = 4-33$

$a_{33} = -29$

(A)

or subt -1 from 3 until you get term #33

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5. $a_n = 27 + (n-1)(-5)$

$a_n = 32 - 5n$

$a_{10} = 32 - 5(10)$

$a_{10} = -18$

(C)

or subt 5 until you get to term #10