



# STEPPING STONE SCHOOL (HIGH)

" Worksheet 14 "

Q1) 'xy'    Q2) 'Proof'    Q3) 'proof'    Q4) 'proof':

Q5) '6' and '24' .    Q6) proof: -    Q7) If three quantities be  $a, b, c$  then given  $b^2 = ac$  - P.T.P  
 $\left(\frac{a}{b}\right)^2 = \frac{a}{c}$  .  $\Rightarrow$  LHS =  $\frac{a^2}{b^2} = \frac{a^2}{ac}$  (  $\because b^2 = ac$  )  
 So LHS =  $\frac{a}{c}$  = RHS .    Q8) Proof

" Worksheet 15 "

Q1) '2' .    Q2) proof .    Q3)  $\frac{5}{4}$  .    Q4) 'proof'

Q5) 'proof' - Hints - Apply Componendo and dividendo

to get :  $\frac{(x+y)^3}{(x-y)^3} = \frac{(m+n)^3}{(m-n)^3} \Rightarrow \frac{x+y}{x-y} = \frac{m+n}{m-n}$

$\Rightarrow \frac{x}{y} = \frac{m}{n} \Rightarrow nx = my$

" WS - 16 "

Q1) i)  $\frac{5}{3}$     ii)  $\frac{76}{49}$  .    Q2) '7' .    Q3) 'proof'

Q4) 'proof' .    Q5) Hints :  $\frac{(1+x+x^2)(1-x)}{(1-x+x^2)(1+x)} = \frac{62}{63}$

$\Rightarrow \frac{1-x^3}{1+x^3} = \frac{62}{63} \Rightarrow x = \frac{1}{5}$  .    Q6) Proof.

## Worksheet '17'

Q1) 7, 12, 17, -----

Q2) '-34' . Q3) No . Q4) This question

last term of the series was 148, which was forgotten to give . Hence,  $l = a_n = 148 = a + (n-1)d$

$$\Rightarrow 148 = 4 + (n-1)3 \Rightarrow (n-1)3 = 144$$

$$\Rightarrow n-1 = 48 \Rightarrow n = '49' \text{ (Ans)}$$

Q5) 18<sup>th</sup> . Q6) '0' . Q7) 209

## Worksheet '18'

Q1)  $a = 13, d = -1$  . Q2) '67' . Q3) '19'

Q4)  $k = 0$  . Q5) '10' . Q6) 25<sup>th</sup> .

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