Corrigé Evaluation Suites

4 **Ex1 :**

1. $u_2 = u_1 + 1 \times r = 2 + 3 = 5$
   $u_9 = u_1 + 8 \times r = 2 + 8 \times 3 = 26$
   $u_{15} = u_1 + 14 \times r = 2 + 14 \times 3 = 44$
   $u_{20} = u_1 + 19 \times r = 2 + 19 \times 3 = 59$

2. $u_2 = u_1 + 1 \times r = 12 + 1 \times (-1{,}4) = 10{,}6$
   $u_9 = u_1 + 14 \times r = 12 + 14 \times (-1{,}4) = -7{,}6$
   $u_{18} = 12 + 17 \times (-1{,}4) = -11{,}8$
   $u_{23} = 12 + 22 \times (-1{,}4) = -18{,}8$

2 **Ex2 :** $u_1 = 3$ $u_{17} = 27$ $r = ?$

$u_{17} = u_1 + 16 \times r$ donc $27 = 3 + 16 \times r$

$24 = 16 \times r$

$\frac{24}{16} = r$ donc $\boxed{r = 1{,}5}$

4,5 **Ex3 :** S.G : $u_n = u_1 \times q^{n-1}$

1. $u_2 = u_1 \times q^1 = -2{,}5 \times 1{,}2 = -3$
   $u_8 = u_1 \times q^7 = -2{,}5 \times 1{,}2^7 = -8{,}96$
   $u_{15} = u_1 \times q^{14} = -2{,}5 \times 1{,}2^{14} = -32{,}1$
   $u_{23} = -2{,}5 \times 1{,}2^{22} = -138{,}02$

2. $u_2 = 1200 \times 0{,}8 = 960$
   $u_{17} = 1200 \times 0{,}8^{16} = 33{,}78$
   $u_{21} = 1200 \times 0{,}8^{20} = 13{,}84$
   $u_{26} = 1200 \times 0{,}8^{25} = 4{,}53$

3 **Ex4 :**

1. $u_4 = 3$ $u_5 = 12$ $q = \frac{12}{3} = 4$

2. a) Suite arithmétique 1er terme : 3 raison : 4
   b) Suite géométrique 1er terme : 2 raison : 3

6,5 **Ex5 :**

1. a) $u_1 = 70$ raison $= 2$: suite arithmétique.
   b) $u_2 = 70 + 2 = 72$ 2005 : 72 camions C
   $u_3 = 72 + 2 = 74$ 2006 : 74 camions C
   c) 2004 $\rightarrow u_1$
   2018 $\rightarrow u_{15}$ $u_{15} = u_1 + 14 \times 2 = 70 + 14 \times 2 = 98$

2) a) v est une suite géométrique de 1er terme $v_1 = 60$ et de raison 1,05.
   b) $v_n = v_1 \times q^{n-1} = 60 \times 1{,}05^{n-1}$
   c) 2018 $\rightarrow v_{15}$ $v_{15} = 60 \times 1{,}05^{14} \approx 119$