```
> a:=vector(20);
```

$$a := \left[{?}_1 \quad {?}_2 \quad {?}_3 \quad {?}_4 \quad {?}_5 \quad {?}_6 \quad {?}_7 \quad {?}_8 \quad {?}_9 \quad {?}_{10} \quad {?}_{11} \quad {?}_{12} \quad {?}_{13} \quad {?}_{14} \quad {?}_{15} \quad {?}_{16} \quad {?}_{17} \quad {?}_{18} \quad {?}_{19} \quad {?}_{20} \right] \tag{1}$$

```
> f:=x->(2*x+7)/5;
```

$$f := x \mapsto \frac{2\,x}{5} + \frac{7}{5} \tag{2}$$

```
> f(x);
```

$$\frac{2\,x}{5} + \frac{7}{5} \tag{3}$$

```
> a[1]:=0;
```

$$a_1 := 0 \tag{4}$$

```
> a;
```

$$a \tag{5}$$

```
> print(a);
```

$$\left[0 \quad a_2 \quad a_3 \quad a_4 \quad a_5 \quad a_6 \quad a_7 \quad a_8 \quad a_9 \quad a_{10} \quad a_{11} \quad a_{12} \quad a_{13} \quad a_{14} \quad a_{15} \quad a_{16} \quad a_{17} \quad a_{18} \quad a_{19} \quad a_{20} \right] \tag{6}$$

```
> for n from 2 to 20 do
>    a[n]:=f(a[n-1]); od:
> print(a);
```

$$\left[0, \frac{7}{5}, \frac{49}{25}, \frac{273}{125}, \frac{1421}{625}, \frac{7217}{3125}, \frac{36309}{15625}, \frac{181993}{78125}, \frac{910861}{390625}, \frac{4556097}{1953125}, \frac{22784069}{9765625}, \right.$$
$$\left. \frac{113927513}{48828125}, \frac{569651901}{244140625}, \frac{2848288177}{1220703125}, \frac{14241498229}{6103515625}, \frac{71207605833}{30517578125}, \right.$$
$$\left. \frac{356038258541}{152587890625}, \frac{1780191751457}{762939453125}, \frac{8900959674789}{3814697265625}, \frac{44504800208953}{19073486328125} \right] \tag{7}$$

```
> seq(a[i],i=1..20);
```

$$0, \frac{7}{5}, \frac{49}{25}, \frac{273}{125}, \frac{1421}{625}, \frac{7217}{3125}, \frac{36309}{15625}, \frac{181993}{78125}, \frac{910861}{390625}, \frac{4556097}{1953125}, \frac{22784069}{9765625},$$
$$\frac{113927513}{48828125}, \frac{569651901}{244140625}, \frac{2848288177}{1220703125}, \frac{14241498229}{6103515625}, \frac{71207605833}{30517578125},$$
$$\frac{356038258541}{152587890625}, \frac{1780191751457}{762939453125}, \frac{8900959674789}{3814697265625}, \frac{44504800208953}{19073486328125} \tag{8}$$

```
> Digits:=20;
```

$$Digits := 20 \tag{9}$$

```
> for i from 1 to 20 do print(evalf(a[i])); od:
```

0.
1.4000000000000000000
1.9600000000000000000
2.1840000000000000000
2.2736000000000000000
2.3094400000000000000
2.3237760000000000000
2.3295104000000000000

2.3318041600000000000
2.3327216640000000000
2.3330886656000000000
2.3332354662400000000
2.3332941864960000000
2.3333176745984000000
2.3333270698393600000
2.3333308279357440000
2.3333323311742976000
2.3333329324697190400
2.3333331729878876160
2.3333332691951550464 **(10)**

```
> seq(7/3-a[i],i=1..20);
```

$$\frac{7}{3}, \frac{14}{15}, \frac{28}{75}, \frac{56}{375}, \frac{112}{1875}, \frac{224}{9375}, \frac{448}{46875}, \frac{896}{234375}, \frac{1792}{1171875}, \frac{3584}{5859375}, \frac{7168}{29296875}, \frac{14336}{146484375}, \frac{28672}{732421875}, \frac{57344}{3662109375}, \frac{114688}{18310546875}, \frac{229376}{91552734375}, \frac{458752}{457763671875}, \frac{917504}{2288818359375}, \frac{1835008}{11444091796875}, \frac{3670016}{57220458984375} \quad \textbf{(11)}$$