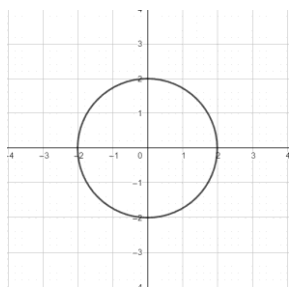
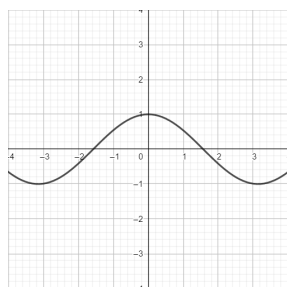


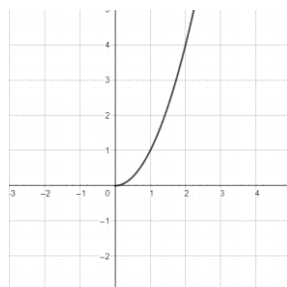
1. Zaokružiti slova ispod pridruživanja koja predstavljaju funkcije:



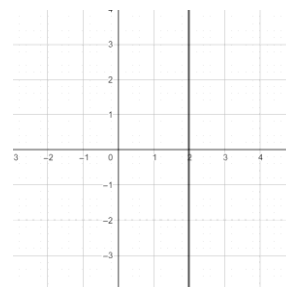
a)



b)



c)



d)

MK  
/1

2. Graf funkcije  $f(x) = \frac{1}{x+2} + 2$  dobije se translacijom grafa funkcije  $g(x) = \frac{1}{x}$  za:

a) 2 lijevo i 2 dolje

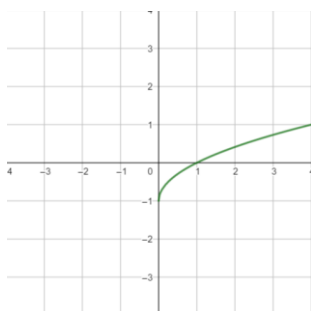
b) 2 desno i 2 dolje

c) 2 lijevo i 2 gore

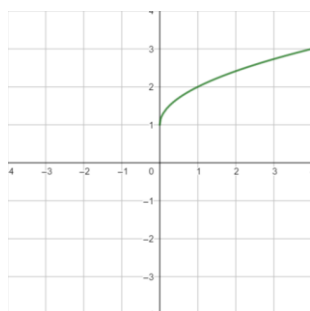
d) 2 desno i 2 gore

MK  
/1

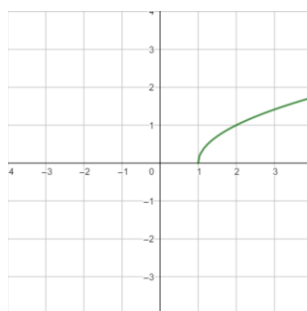
3. Graf funkcije  $m(x) = \sqrt{x-1}$  prikazan je na slici:



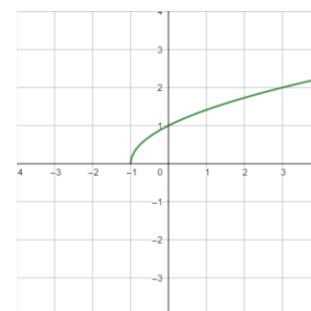
a)



b)



c)



d)

MK  
/1

4. Odrediti prirodnu domenu funkcije:

a)  $f(x) = \frac{4x}{x^2 - 9}$

b)  $g(x) = \sqrt{3x - 4}$

UZV  
/1UZV  
/1

5. Nacrtati graf i odrediti sliku funkcije:

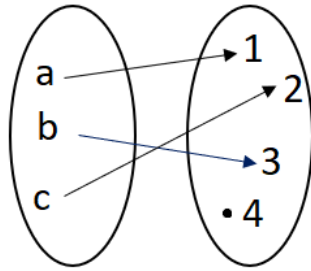
a)  $h: [-1, 3] \rightarrow \mathbb{R}, h(x) = x - 2$

b)  $k: \{-1, 0, 1\} \rightarrow \mathbb{R}, k(x) = x^2 + 3$

UZV  
/1MK  
/1UZV  
/1MK  
/1

6. Injektivnost, surjektivnost i bijektivnost funkcije

a) Je li funkcija prikazana na slici bijekcija?  
 Objasni odgovor.



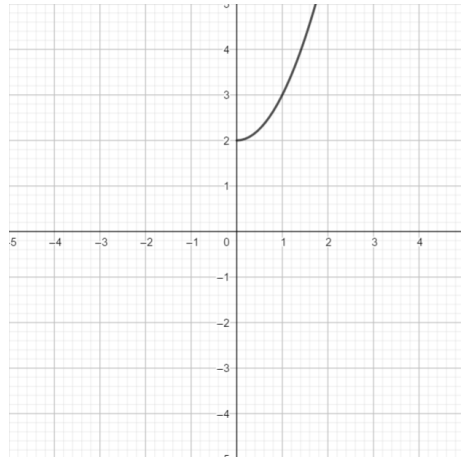
b) Računski dokazati injektivnost funkcije  $f(x) = 4x + 3$ .

UZV /1

UZV /1

7. Inverzna funkcija

a) Skicirati graf inverzne funkcije funkcije prikazane na slici.

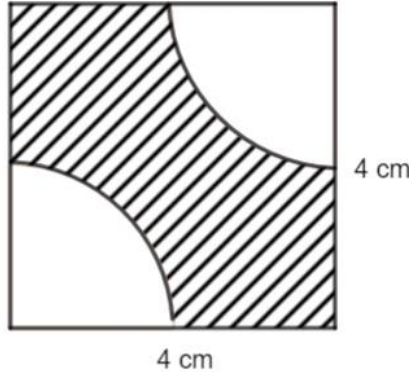


b) Računski odrediti inverznu funkciju funkcije  $f(x) = 4x + 3$ .

MK /1

UZV /1

8. Izračunati površinu osjenčanog dijela lika na slici.

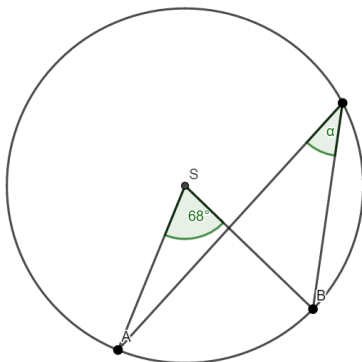


9. Ako je polumjer kružnice 30 mm, naći središnji kut koji pripada luku duljine 2 cm.

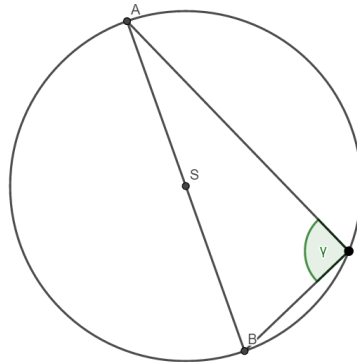
UZV /1

UZV /1

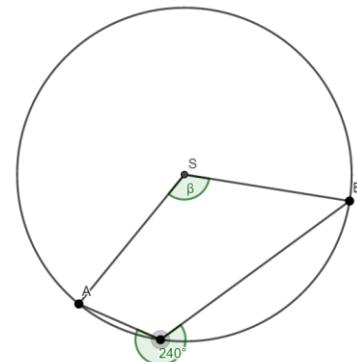
10. Odrediti nepoznate kutove na danim slikama.



a)  $\alpha =$



b)  $\gamma =$



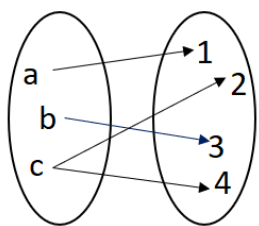
c)  $\beta =$

MK /1

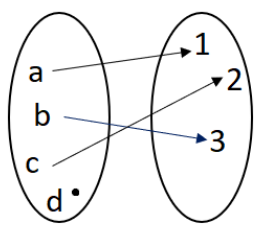
MK /1

MK /1

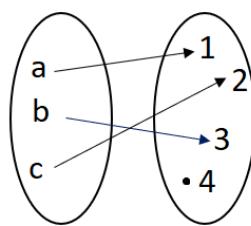
1. Zaokružiti slova ispod pridruživanja koja predstavljaju funkcije:



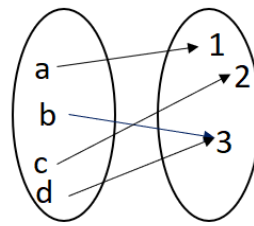
a)



b)



c)



d)

MK  
/1

2. Graf funkcije  $f(x) = \sqrt{x-1} - 1$  dobije se translacijom grafa funkcije  $g(x) = \sqrt{x}$  za:

a) 1 lijevo i 1 dolje

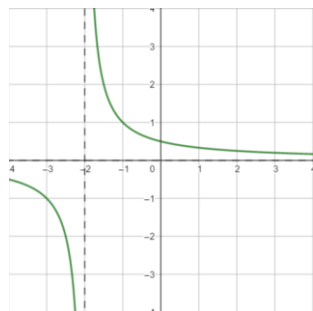
b) 1 desno i 1 dolje

c) 1 lijevo i 1 gore

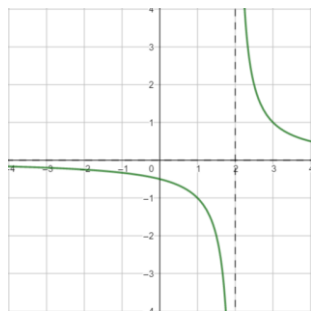
d) 1 desno i 1 gore

MK  
/1

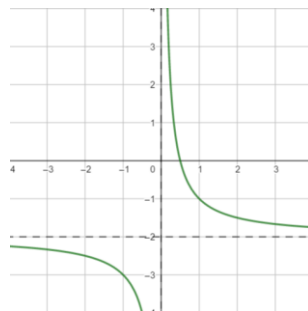
3. Graf funkcije  $m(x) = \frac{1}{x+2}$  prikazan je na slici:



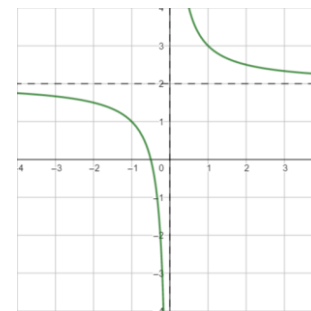
a)



b)



c)



d)

MK  
/1

4. Odrediti prirodnu domenu funkcije:

a)  $f(x) = \frac{x+3}{x^2-5x}$

b)  $g(x) = \sqrt{5x+2}$

UZV  
/1UZV  
/1

5. Nacrtati graf i odrediti sliku funkcije:

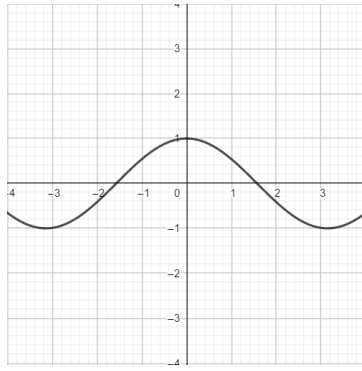
a)  $h: [-4, 1] \rightarrow \mathbb{R}, h(x) = x + 3$

b)  $k: \{-2, 0, 2\} \rightarrow \mathbb{R}, k(x) = x^2 - 2$

UZV  
/1MK  
/1UZV  
/1MK  
/1

6. Injektivnost, surjektivnost i bijektivnost funkcije

a) Je li funkcija prikazana na slici bijekcija? Obrazložiti odgovor.



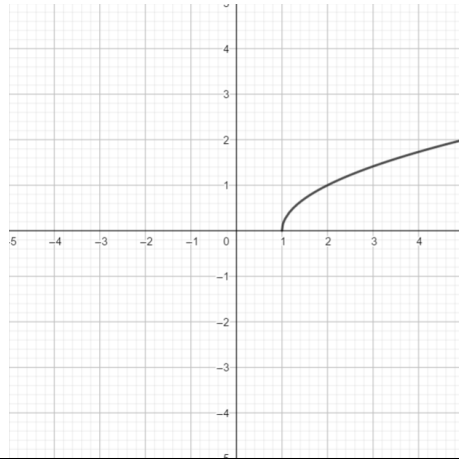
b) Računski dokazati injektivnost funkcije  $f(x) = 2x - 5$ .

UZV /1

UZV /1

7. Inverzna funkcija

a) Skicirati graf inverzne funkcije funkcije prikazane na slici.

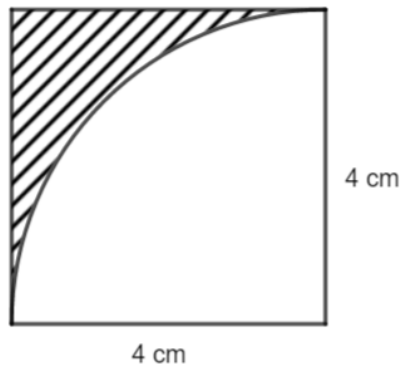


b) Računski odrediti inverznu funkciju funkcije  $f(x) = 2x - 5$ .

MK /1

UZV /1

8. Izračunati površinu osjenčanog dijela lika na slici.

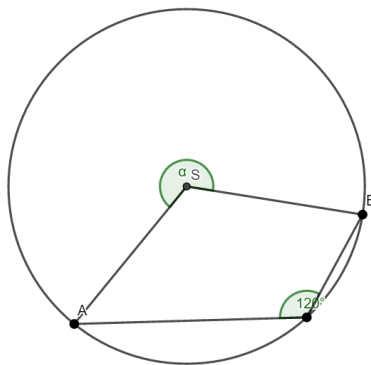


9. Ako je polumjer kružnice 20 mm, naći središnji kut koji pripada luku duljine 3 cm.

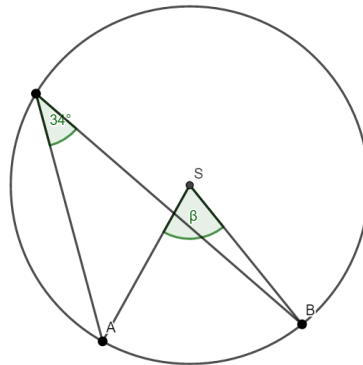
UZV /1

UZV /1

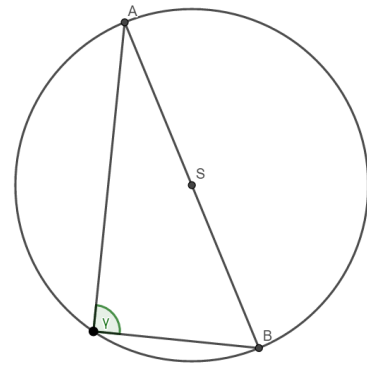
10. Odrediti nepoznate kutove na danim slikama.



a)  $\alpha =$



b)  $\beta =$



c)  $\gamma =$

MK /1

MK /1

MK /1