

1. Izračunaj!

$$\begin{array}{ccccc}
 6^2 = \underline{\quad} & (-5)^2 = \underline{\quad} & -5^2 = \underline{\quad} & 7^0 = \underline{\quad} & (-1)^5 = \underline{\quad} \\
 (-1)^{100} = \underline{\quad} & 4^3 = \underline{\quad} & (-2)^6 = \underline{\quad} & 12^2 = \underline{\quad} & 16^2 = \underline{\quad} \\
 (-13)^2 = \underline{\quad} & -14^2 = \underline{\quad} & 8^2 = \underline{\quad} & 11^2 = \underline{\quad} & (-9)^2 = \underline{\quad}
 \end{array}$$

2. Izračunaj!

$$\begin{array}{ccc}
 2^2 = \underline{\quad} & 12^2 = \underline{\quad} & 1^2 = \underline{\quad} \\
 0,2^2 = \underline{\quad} & 1,2^2 = \underline{\quad} & 0,1^2 = \underline{\quad} \\
 0,02^2 = \underline{\quad} & 0,12^2 = \underline{\quad} & 0,01^2 = \underline{\quad} \\
 0,009^2 = \underline{\quad} & 0,003^2 = \underline{\quad} & 0,012^2 = \underline{\quad} \\
 30^2 = \underline{\quad} & 16^2 = \underline{\quad} & 11^2 = \underline{\quad} \\
 300^2 = \underline{\quad} & 1600^2 = \underline{\quad} & 110^2 = \underline{\quad} \\
 3000^2 = \underline{\quad} & 16000^2 = \underline{\quad} & 1100^2 = \underline{\quad} \\
 \left(\frac{3}{4}\right)^2 = \underline{\quad} & \left(\frac{2}{3}\right)^2 = \underline{\quad} & \left(1\frac{1}{9}\right)^2 = \underline{\quad} \\
 5^2 = \underline{\quad} & 0,5^2 = \underline{\quad} & 0,05^2 = \underline{\quad} \\
 15^2 = \underline{\quad} & 1,5^2 = \underline{\quad} & 0,15^2 = \underline{\quad} \\
 16^2 = \underline{\quad} & 1,6^2 = \underline{\quad} & 0,16^2 = \underline{\quad}
 \end{array}$$

## KVADRATNI KOREN

korenski eksponent

korenski znak

$$2\sqrt{9} = \sqrt{9} = 3$$

korenjenec

**Kvadratni koren** je obratna računska operacija računske operacije kvadriranja za vsako število  $a$ , če je  $a \geq 0$ .

Zgled:

$$\sqrt{4} = 2, \text{ ker je } 2^2 = 4$$

$$\sqrt{25} = 5, \text{ ker je } 5^2 = 25$$

$$\sqrt{64} = 8, \text{ ker je } 8^2 = 64$$

$$\sqrt{169} = 13, \text{ ker je } 13^2 = 169$$

$$\sqrt{90000} = 300,$$

$$\sqrt{0,0001} = 0,01$$

Število ničel se prepolovi, enako število decimalnih mest

Vaje:

$$\sqrt{144} = \underline{\hspace{2cm}}$$

$$\sqrt{\frac{81}{121}} = \underline{\hspace{2cm}}$$

$$\sqrt{1,69} = \underline{\hspace{2cm}}$$

$$\sqrt{360000} = \underline{\hspace{2cm}}$$

$$\sqrt{900} = \underline{\hspace{2cm}}$$

$$\sqrt{1} = \underline{\hspace{2cm}}$$

$$\sqrt{0,09} = \underline{\hspace{2cm}}$$

$$\sqrt{16} = \underline{\hspace{2cm}}$$

$$\sqrt{1600} = \underline{\hspace{2cm}}$$

3. Vstavi ustrezno število !

$$\sqrt{\hspace{2cm}} = 11$$

$$\sqrt{\hspace{2cm}} = 3$$

$$\sqrt{\hspace{2cm}} = 40$$

$$\sqrt{\hspace{2cm}} = 15$$

$$\sqrt{\hspace{2cm}} = 900$$

$$\sqrt{\hspace{2cm}} = 0,6$$

4. Reši enačbo !

$$x^2 = 49$$

$$x^2 = 625$$

$$x^2 = 9$$

$$x = \sqrt{49}$$

$$x_1 = 7$$

$$x_2 = -7$$

imamo dve rešitvi, saj je  $7^2 = 49$  in  $(-7)^2 = 49$

## RAČUNANJE S POTENCAMI

1. Izračunaj čimbolj spretno !

$$1^{100} \cdot 2^4 \cdot 1^{50} \cdot 2^3 =$$

$$-2^3 \cdot 3^3 \cdot (-0,1)^2 \cdot 3 \cdot 2 \cdot (-0,1) =$$

$$0,2 \cdot 10^3 \cdot 0,2 \cdot 10^5 =$$

$$2^3 \cdot 2 \cdot 2^5 =$$

$$a^4 b^6 a b^7 =$$

$$-2^3 \cdot (-3)^2 \cdot (-2)^4 =$$

$$x^4 \cdot x \cdot x^3 =$$

$$(a^3)^2 \cdot a^5 =$$

Produkte zapiši s potenco.

a)  $ab \cdot ab \cdot ab \cdot ab \cdot ab = \square \square$

b)  $5xy \cdot 5xy \cdot 5xy = \square \square$

c)  $(a - b)(a - b)(a - b)(a - b) = \square \square$

d)  $(-4m)(-4m) = \square$

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## 2. Izračunaj vrednosti potenc.

a)  $(-0,2)^4 = \square$

b)  $-50^3 = \square$

c)  $-(-1,3)^2 = \square$

d)  $-0,01^4 = \square$

e)  $-(-0,6)^3 = \square$

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## 3. Produnkte zapiši z eno potenco.

a)  $a^5 a^2 = \square \square$

b)  $b b^2 b^3 = \square \square$

c)  $(-x)^2 (-x) (-x) = \square \square$

d)  $(2y)^3 : (2y)^4 = \square \square$

e)  $m m^2 m^2 m = \square \square$

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## 4. Količnik zapiši z eno potenco.

a)  $x^7 : x = \square \square$

b)  $(-y)^5 : (-y)^3 = \square \square$

c)  $m^3 : m^4 = \square \square$

d)  $(-n)^6 : (-n)^9 = \square \square$

e)  $(-ab)^8 : (-ab)^5 = \square \square$

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## 5. Zapiši z eno potenco in poenostavi, kjer se da.

a)  $x^3 : (-5)^3 = \square \square$

b)  $(-3a)^2 : b^2 = \square \square$

c)  $(0,2x)^5 : (7y)^5 = \square \square$

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## 6. Zapiši z eno potenco.

a)  $x^4 : y^4 =$

 

b)  $(-3)^3 : a^3 =$

 

c)  $(2m)^5 : (-n)^5 =$

 

d)  $(6ab)^2 : (3c)^2 =$

  

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$1^2 = 1$	$11^2 = 121$	$21^2 = 441$	$31^2 = 961$
$2^2 = 4$	$12^2 = 144$	$22^2 = 484$	$32^2 = 1024$
$3^2 = 9$	$13^2 = 169$	$23^2 = 529$	
$4^2 = 16$	$14^2 = 196$	$24^2 = 576$	
$5^2 = 25$	$15^2 = 225$	$25^2 = 625$	
$6^2 = 36$	$16^2 = 256$	$26^2 = 676$	
$7^2 = 49$	$17^2 = 289$	$27^2 = 729$	
$8^2 = 64$	$18^2 = 324$	$28^2 = 784$	
$9^2 = 81$	$19^2 = 361$	$29^2 = 841$	
$10^2 = 100$	$20^2 = 400$	$30^2 = 900$	

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$2^2 = 4$	$3^2 = 9$	$4^2 = 16$	$5^2 = 25$	$6^2 = 36$
$2^3 = 8$	$3^3 = 27$	$4^3 = 64$	$5^3 = 125$	$6^3 = 216$
$2^4 = 16$	$3^4 = 81$	$4^4 = 256$	$5^4 = 625$	$6^4 = 1296$
$2^5 = 32$				
$2^6 = 64$				
$2^7 = 128$				