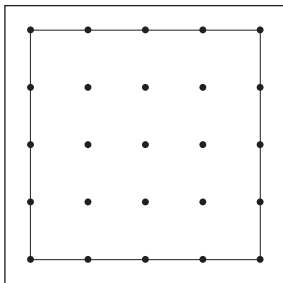


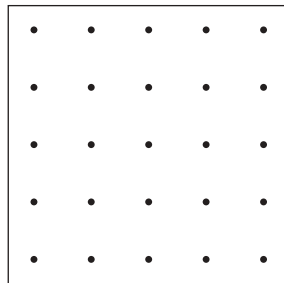
1.

Maja je z elastiko oblikovala največji mogoči kvadrat na geoplošči  $5 \times 5$ . Narisala ga je na sliki geoplošče. Ugotovila je, da je v notranjosti tega kvadrata 9 žebličkov.

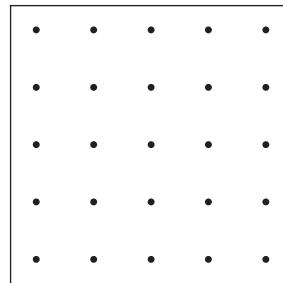
a) Na geoplošči  $5 \times 5$  oblikuj vsaj 10 izbočenih večkotnikov, ki imajo v svoji notranjosti 9 žebličkov. Večkotniki naj ne bodo med seboj skladni. Nariši jih na slike geoplošč. Poimenuj jih glede na število stranic.



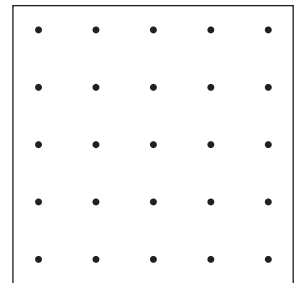
A kvadrat



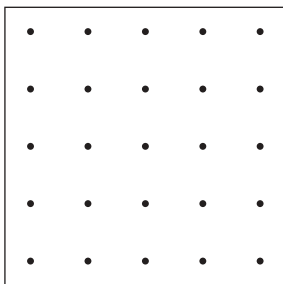
B \_\_\_\_\_



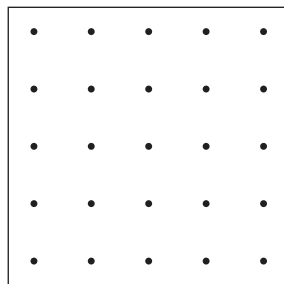
C \_\_\_\_\_



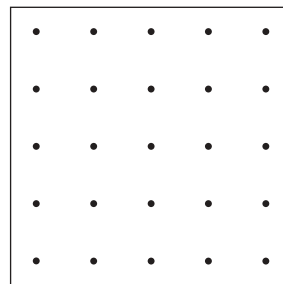
D \_\_\_\_\_



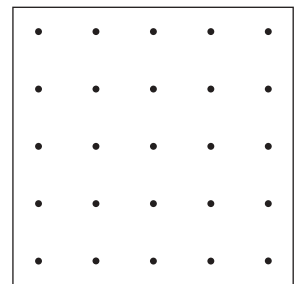
E \_\_\_\_\_



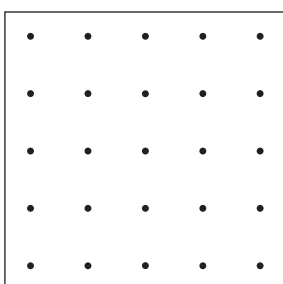
F \_\_\_\_\_



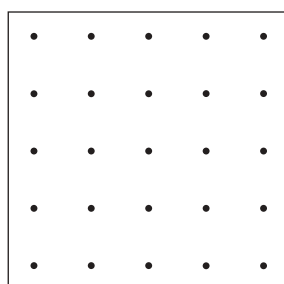
G \_\_\_\_\_



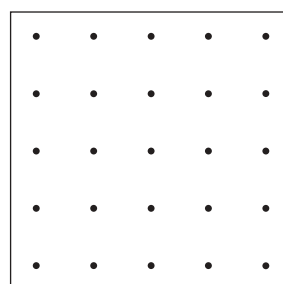
H \_\_\_\_\_



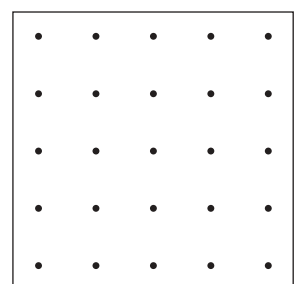
I \_\_\_\_\_



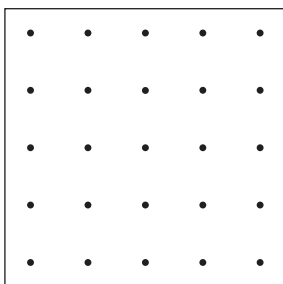
J \_\_\_\_\_



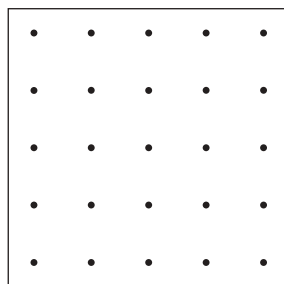
K \_\_\_\_\_



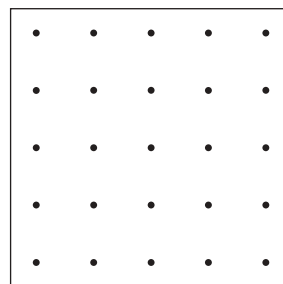
L \_\_\_\_\_



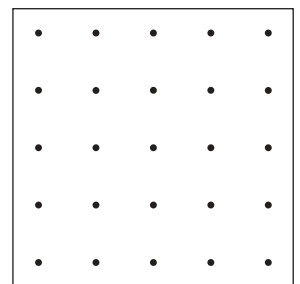
M \_\_\_\_\_



N \_\_\_\_\_



O \_\_\_\_\_



P \_\_\_\_\_



1. Zapiši potenco in izračunaj njeno vrednost.

a) Pet na kub: \_\_\_\_\_

b) Minus štiri na kvadrat: \_\_\_\_\_

c) Tri na tri: \_\_\_\_\_

č) Minus dve na štiri: \_\_\_\_\_

2. Zapiši kot potenco oziroma kot zmnožek potenc.

$9 \cdot 9 \cdot 9 \cdot 9 =$  \_\_\_\_\_

$2 \cdot 2 \cdot 2 =$  \_\_\_\_\_

$(-4) \cdot (-4) =$  \_\_\_\_\_

$12 \cdot 12 \cdot 12 \cdot 12 \cdot 12 =$  \_\_\_\_\_

$(-3) \cdot (-3) \cdot (-3) \cdot (-3) =$  \_\_\_\_\_

$7 \cdot 7 \cdot 3 \cdot 3 \cdot 3 =$  \_\_\_\_\_

$5 \cdot 5 \cdot 8 \cdot 8 \cdot 8 \cdot 8 =$  \_\_\_\_\_

$a \cdot a \cdot a \cdot 6 =$  \_\_\_\_\_

$m \cdot m \cdot t \cdot t \cdot t \cdot t \cdot 10 \cdot 10 \cdot 10 =$  \_\_\_\_\_

$(-1) \cdot (-1) \cdot (-1) \cdot z \cdot z \cdot z \cdot z \cdot z =$  \_\_\_\_\_

3. Prečrtaj števila, ki niso vrednosti potence števila 2.

1   8   12   32   28   16   30   64   128   256

\_\_\_\_\_

\_\_\_\_\_

4. Večkratnike števila 3 obkroži z modro barvo, vrednosti potence števila 3 pa z zeleno barvo. Kaj opaziš?

15   3   9   21   23   27   81   33   60   51   100

\_\_\_\_\_

\_\_\_\_\_

5. Zapiši kot zmnožek potenc.

$y \cdot y \cdot m \cdot m \cdot m =$  \_\_\_\_\_

$(-a) \cdot b \cdot (-a) \cdot b \cdot (-a) =$  \_\_\_\_\_

$n \cdot n \cdot m \cdot n \cdot m \cdot m =$  \_\_\_\_\_

1.

Zapiši kot potenco in izračunaj njeno vrednost.

$(-0,5) \cdot (-0,5) \cdot (-0,5) =$  \_\_\_\_\_

$1,6 \cdot 1,6 =$  \_\_\_\_\_

$(-2,3) \cdot (-2,3) =$  \_\_\_\_\_

$0,12 \cdot 0,12 =$  \_\_\_\_\_

$0,1 \cdot 0,1 \cdot 0,1 \cdot 0,1 \cdot 0,1 =$  \_\_\_\_\_

2.

Izračunaj vrednost potence.

$0,5^2 =$  \_\_\_\_\_  $0,3^3 =$  \_\_\_\_\_  $(-0,7)^2 =$  \_\_\_\_\_  $(-0,02)^3 =$  \_\_\_\_\_

$1,2^2 =$  \_\_\_\_\_  $-0,6^3 =$  \_\_\_\_\_  $-(-0,01)^3 =$  \_\_\_\_\_  $(-0,4)^3 =$  \_\_\_\_\_

$0,09^2 =$  \_\_\_\_\_  $-(-0,8)^2 =$  \_\_\_\_\_  $-0,05^3 =$  \_\_\_\_\_  $-1,3^2 =$  \_\_\_\_\_

3.

Izračunaj vrednost potence.

$\left(\frac{1}{3}\right)^3 =$  \_\_\_\_\_  $\left(-\frac{4}{5}\right)^2 =$  \_\_\_\_\_

$-1\frac{1}{5}^3 =$  \_\_\_\_\_  $\left(-1\frac{3}{4}\right)^2 =$  \_\_\_\_\_

$-5\frac{1}{2}^2 =$  \_\_\_\_\_  $\left(-4\frac{1}{3}\right)^2 =$  \_\_\_\_\_

$\left(\frac{7}{8}\right)^2 =$  \_\_\_\_\_  $\left(-\frac{9}{10}\right)^2 =$  \_\_\_\_\_

$\left(-\left(-1\frac{1}{3}\right)\right)^2 =$  \_\_\_\_\_  $\left(-2\frac{1}{4}\right)^2 =$  \_\_\_\_\_

4.

Izračunaj.

$10^2 =$  \_\_\_\_\_

$(-30)^3 =$  \_\_\_\_\_

$600^3 =$  \_\_\_\_\_

$2000^2 =$  \_\_\_\_\_

$(-900)^2 =$  \_\_\_\_\_

$-(-50)^4 =$  \_\_\_\_\_

$11\,000^2 =$  \_\_\_\_\_

$-(-100)^3 =$  \_\_\_\_\_

5.

Potenciraj.

$$\left(\frac{a}{-b}\right)^2 = \frac{a^2}{(-b)^2} = \frac{a^2}{b^2}$$

$\left(\frac{x}{3}\right)^3 =$  \_\_\_\_\_

$\left(\frac{a}{b}\right)^5 =$  \_\_\_\_\_

$\left(-\frac{4}{u}\right)^3 =$  \_\_\_\_\_

$\left(-\frac{a}{b}\right)^2 =$  \_\_\_\_\_

$\left(-\frac{t}{p}\right)^8 =$  \_\_\_\_\_

$\left(-\frac{7}{m}\right)^2 =$  \_\_\_\_\_

$\left(\frac{s}{-9}\right)^2 =$  \_\_\_\_\_

$\left(-\frac{10}{z}\right)^5 =$  \_\_\_\_\_

$\left(-\left(\frac{d}{-10}\right)\right)^4 =$  \_\_\_\_\_

$\left(-\frac{5}{-b}\right)^3 =$  \_\_\_\_\_

Vstavi znak  $<$ ,  $>$  ali  $=$ .

6.

$0,3^2 \square \left(\frac{3}{10}\right)^2$

$\left(1\frac{1}{2}\right)^3 \square 2^2$

$0,4^3 \square \frac{8}{125}$

$5^3 \square 3^5$

$1,1^2 \square \left(1\frac{1}{3}\right)^2$

$\left(-\frac{2^3}{3^2}\right) \square \left(-\frac{2}{3}\right)^3$

$\left(-\frac{5^2}{11}\right) \square -3$

$\frac{3}{4} \square \left(\frac{3}{4}\right)^3$

Vstavi znak  $>$  ali  $<$ .

7.

$\frac{1}{3} \square \left(\frac{1}{3}\right)^2$

$\frac{5}{6} \square \left(\frac{5}{6}\right)^2$

$\frac{4}{5} \square \left(\frac{4}{5}\right)^2$

$\frac{2}{7} \square \left(\frac{2}{7}\right)^2$

1.

Zmnoži. Rezultat zapiši kot potenco.

a)  $2^3 \cdot 2^5 =$  \_\_\_\_\_ b)  $3,4^3 \cdot 3,4^7 =$  \_\_\_\_\_ c)  $\left(\frac{2}{3}\right)^3 \cdot \left(\frac{2}{3}\right) =$  \_\_\_\_\_

$(-7)^4 \cdot (-7)^2 =$  \_\_\_\_\_  $0,9 \cdot 0,9^6 =$  \_\_\_\_\_  $\left(-\frac{5}{7}\right)^7 \cdot \left(-\frac{5}{7}\right)^8 =$  \_\_\_\_\_

$11^2 \cdot 11^{10} =$  \_\_\_\_\_  $(-1,8)^5 \cdot (-1,8)^{11} =$  \_\_\_\_\_  $\left(-1\frac{9}{10}\right)^{10} \cdot \left(-1\frac{9}{10}\right)^{10} =$  \_\_\_\_\_

$3^9 \cdot 3^9 =$  \_\_\_\_\_  $2,03^{12} \cdot 2,03^7 =$  \_\_\_\_\_  $\left(3\frac{2}{5}\right) \cdot \left(3\frac{2}{5}\right)^9 =$  \_\_\_\_\_

$(-5)^7 \cdot (-5)^8 =$  \_\_\_\_\_  $(-4,7)^{15} \cdot (-4,7)^{13} =$  \_\_\_\_\_  $\left(\frac{85}{111}\right)^7 \cdot \left(\frac{85}{111}\right)^{17} =$  \_\_\_\_\_

2.

Deli.

a)  $4^3 : 4^2 =$  \_\_\_\_\_  $2^8 : 2^7 =$  \_\_\_\_\_  $\frac{(-5)^4}{(-5)^2} =$  \_\_\_\_\_

b)  $(-1,3)^5 : (-1,3)^3 =$  \_\_\_\_\_  $5,4^8 : 5,4 =$  \_\_\_\_\_  $\frac{0,6^5}{0,6^2} =$  \_\_\_\_\_

c)  $\left(-\frac{3}{8}\right)^{12} : \left(-\frac{3}{8}\right)^{10} =$  \_\_\_\_\_  $\left(1\frac{1}{2}\right)^9 : \left(1\frac{1}{2}\right)^5 =$  \_\_\_\_\_  $\frac{\left(-\frac{11}{20}\right)^{20}}{\left(-\frac{11}{20}\right)^{10}} =$  \_\_\_\_\_

3.

Kateri izraz ima vrednost, ki je 5-krat tolikšna, kot je  $5^6$ ?

$5^6 + 5$        $5^6 : 5$        $5^6 - 5$        $5^{6+1}$

4.

V enakostraničnem trikotniku je stranica dolga  $3^3$  mm. Ali je obseg tega trikotnika  $3^4$  mm?

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O: \_\_\_\_\_

5. Zapiši v krajši obliki.

a)  $x^3 \cdot x =$  \_\_\_\_\_

$a^2 \cdot a^5 \cdot a^7 =$  \_\_\_\_\_

$c^3 \cdot c^8 \cdot c =$  \_\_\_\_\_

$(xy) \cdot (xy) \cdot (xy) =$  \_\_\_\_\_

$\frac{1}{2} \cdot b^2 \cdot 5b^3 =$  \_\_\_\_\_

$4,8f^3 \cdot \frac{2}{5}f^7 =$  \_\_\_\_\_

b)  $x^2 \cdot y^2 \cdot x \cdot y^3 =$  \_\_\_\_\_

$z^5 \cdot z^4 \cdot u^5 \cdot u^6 =$  \_\_\_\_\_

$8d^7 \cdot 4d =$  \_\_\_\_\_

$7^2 \cdot m^4 \cdot 3 \cdot 7 \cdot 3^3 \cdot m^5 =$  \_\_\_\_\_

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

$\left(-\frac{1}{4}e^2\right) \cdot \left(-\frac{1}{4}e^2\right)^2 =$  \_\_\_\_\_

6. Zapiši v krajši obliki.

a)  $y^{11} : y^8 =$  \_\_\_\_\_

$m^{14} : m^{12} =$  \_\_\_\_\_

$(4,2m^7) : (2m^3) =$  \_\_\_\_\_

$\left(\frac{3}{5}n^{10}\right) : (0,9n^8) =$  \_\_\_\_\_

b)  $\frac{9a^8}{3a} =$  \_\_\_\_\_

$\frac{14b^3}{21b^2} =$  \_\_\_\_\_

$\frac{x^5 \cdot a^{10}}{x^5 \cdot a^4} =$  \_\_\_\_\_

$\frac{0,9x^5y^7}{0,3yx^2} =$  \_\_\_\_\_

7. Knjiga ima  $6^3$  strani. Anže je že prebral  $5^3$  strani. Prebrati mora še 10 več kot  $3^4$  strani. Ali to drži?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

O: \_\_\_\_\_



8. Ocenjujejo, da se očesne mišice premaknejo več kot  $10^5$ -krat na dan. Veliko teh gibov naredijo v t. i. fazi REM, ko med spanjem sanjamo. Približno kolikokrat se očesne mišice premaknejo v 10 dneh? Rezultat zapiši kot potenco.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

O: \_\_\_\_\_

