



Name: _____

Year / Class: _____ Genre (M/F): _____ Date: _____

This questionnaire aims to collect information about students' learning difficulties in the subject of Mathematics.
Your answers are very important and the SMiLD team thanks you for your cooperation.

1. Order the following *numbers* from *the smallest to the greatest*:

0.233 ----- 0.3 ----- 0.32 ----- 0.35 ----- 0.208

Answer:

2. Write in digits:

- a) 3 tens 5 cents 0 units 8 tenths 3 hundreds
- b) 4 cents 7 tens 1 hundreds 9 tenths 0 units
- c) 3 hundreds 1 thousand 8 units 4
- d) 0 tens 7 units 0 hundreds 9 thousands
- e) 9 cents 0 tens 7 hundreds 4 tenths 5 units
- f) 4 tens 1 units 7 hundreds 3 thousand
- g) 5 units 3 cents 7 tens 0 tenths 9 hundreds
- h) 14 tenths, 5 units, 0 tens, 1 hundreds

3. Find the largest number of each of the following four series of numbers:

1.	a) 6,87	b) 3^2	c) $\frac{1}{2}$	d) 8,51	e) $\frac{5}{2}$
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2.	a) 3,84	b) $\frac{45}{9}$	c) 4,97	d) 1^9	e) 2,01
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3.	a) 14,62	b) 4^2	c) $\frac{24}{2}$	d) 15^1	e) 16,001
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4.	a) 27^0	b) 19,86	c) $\frac{12}{3}$	d) 23,57	e) 3^2
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4. Perform the following calculations:

a) $7524,8 + 462,35 =$ _____

b) $119 - 94,36 =$ _____

c) $2527 \times 3 =$ _____

d) $1140,5 : 21 =$ _____

5. Perform the following calculations:

a) $2^0 =$ _____

b) $(-2) \times (-3) =$ _____

c) $\frac{3}{3^2} =$ _____

d) $\sqrt{0} =$ _____

e) $2+3 \times 4 =$ _____

6. The denominator of the fraction $\frac{2}{5}$ is _____ .

7. Is the colored digit in 238 called “unit”, “ten” or “tenth”?

Answer:

8. Calculate the values of the following expressions:

a) $\frac{3}{4} - \frac{2}{3} =$ _____

g) $2^7 \times 2^3 =$ _____

b) $\frac{3}{4} : \frac{3}{7} =$ _____

h) $\sqrt{5} \times \sqrt{20} =$ _____

c) $\sqrt{25} + 2\sqrt{25} =$ _____

i) $75 : (-25) =$ _____

d) $(-12) \times (23) =$ _____

j) $61,5 : 4,1 =$ _____

e) $57,8 \times 2,94 =$ _____

k) $5^7 : 5^2 =$ _____

f) $\frac{7}{2} \times \frac{18}{21} =$ _____

l) $\sqrt{2} : \sqrt{6} =$ _____





9. Solve the following expressions:

a) $a \times a = \underline{\hspace{2cm}}$

e) $\sqrt[2]{a^3} = a^{\underline{\hspace{1cm}}}$

b) $a + a = \underline{\hspace{2cm}}$

f) $a + 2a = \underline{\hspace{2cm}}$

c) $2a : a = \underline{\hspace{2cm}}$

g) $a \times (b+c) = \underline{\hspace{2cm}}$

d) $\frac{2a}{a} = \underline{\hspace{2cm}}$

10. If $a+2b=5$ e $c=3$, what is the value of $a + 2(b + c)$?

Answer:

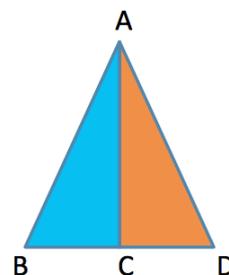
11. If $x = -3$, what is the value of $-(-x)$?

Answer:

12. Take a look at the following figure:

a) What type of triangle is CDA?

Answer:



BC=CD, BA=AD

b) What type of triangle is BDA?

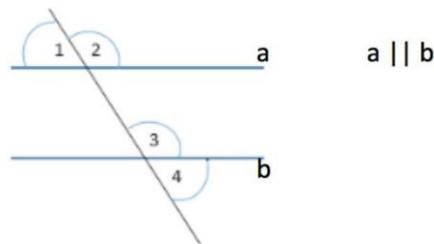
Answer:





13. The sum of the interior angles of a triangle is equal to _____

14. Which sentences are true?



- a) Angles 1 and 4 are equal. b) Angles 2 and 3 have them of 180° .
c) Angles 1 e 2 have the sum of 180° . d) Angle 3 is greater than angle 2.

15. Solve the following problems:

a) Stella has washed 5 pairs of socks. When she went to take them out of the washing machine one sock was missing. How many socks did Stella take out of the washing machine?

Answer:

b) Peter has 40 cards. If Alex loses 10 cards, he will have as many as cards Peter does. How many cards does Alex have?

Answer:

c) One family has 3 children. Each child of the family drinks 2 glasses of milk every day. How many glasses of milk will the family drink during 10 days?

Answer:

d) To make 4 handbags crocheted in cotton, 6 cotton balls are needed. How many balls do you need to make 20 handbags?

Answer:





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- e) Sara received 24 euros as a gift, Marta received 6 euros less. How many euros have the two girls in total?

Answer:

16. Represent in algebraic form the following game:

- a) Think of a number, double it, add 4, divide by 2, remove the number you thought.

Answer:

- b) If you perform the game, you get 2 as a result: why?

Answer:

17. $\frac{4}{5}$ of the animals on the farm are cows. Express the number of cows as a percentage of the total of animals of the farm.

Answer:

18. Complete, choosing a number between 200 e 800.

$$\underline{\quad\quad} : 2 = 400$$

19. Enter the appropriate operation to make the equality true:

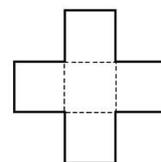
a) $37 \underline{\quad} 5 = 185$

b) $10 \underline{\quad} 8 \underline{\quad} 79 = 1$

20. The figure consists of 5 squares of equal area. The area of the whole figure is 245 cm^2 .

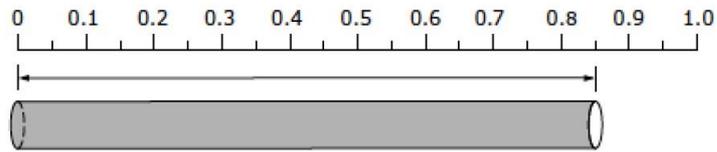
Find the area of one square?

Answer: _____ cm^2 .





21. What is the length of the pipe being measured (in metres)?



- a) 0,085m b) 0,805m c) 0,85m d) 8,5m

22. If $a = 3$ what is the value of $2a + 1$?

Answer:

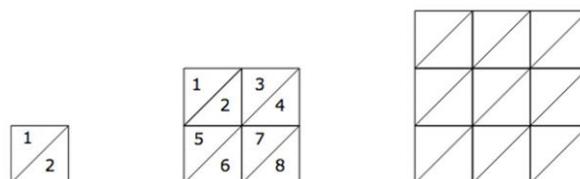
23. If $x = -4$, what is the value of $\frac{24}{x}$?

- a) 6 b) $\frac{1}{6}$ c) $-\frac{1}{6}$ d) -6 e) 20

24. If $2n$ represents a generic even number, how would you write a generic multiple of 7?

Answer:

25. The three figures below are divided into small congruent triangles.



a) Complete the table below, starting by indicating how many triangles make up the third figure. Next, find out how many triangles it would be needed for the 4th figure, if the sequence is extended.



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Figure	Number of triangles
1	2
2	8
3	
4	

b) The sequence of figures is extended to the 7th one. How many small triangles would be needed for figure 7?

Answer:

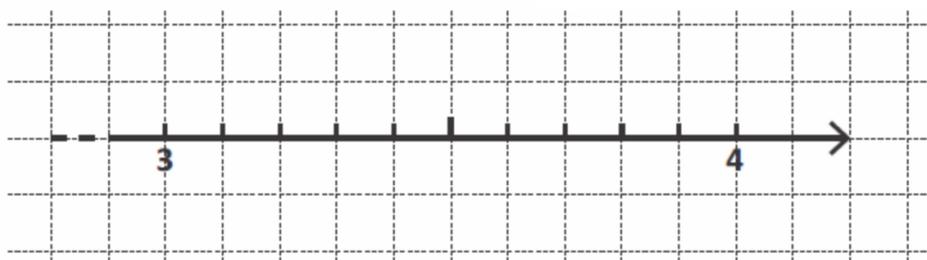
26. Which digit would you insert in place of the stain, to make the operation correct?

Answer:

$$\begin{array}{r} 25 + \\ \text{●}7 = \\ \hline 62 \end{array}$$

27. Place the following numbers in the correct position on the number line:

π ; $\sqrt{16}$; 3,60; $\frac{335}{100}$





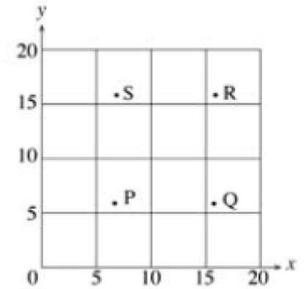
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28. Which point of the coordinates has the coordinates (7,16)?

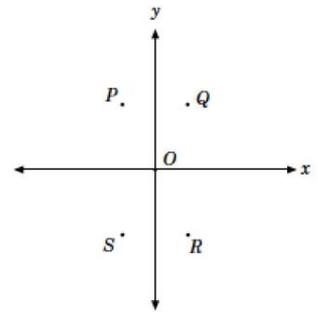
- a) P b) Q c) R d) S

QUESTIONNAIRE



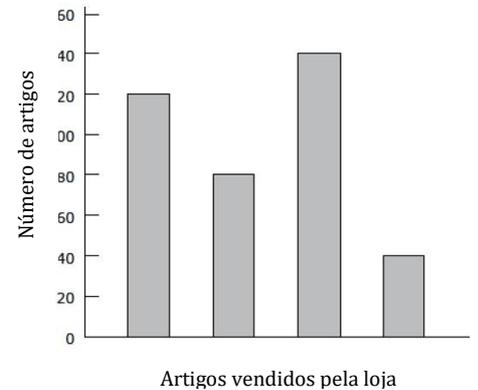
29. In the coordinate plane, which point could have coordinate (2,-4)?

- a) P b) Q c) R d) S



30. The graph shows the number of pens, pencils, rulers and erasers sold in a store during a week. The names of the articles do not appear on the chart. Pens are the best selling item and erasers are the least sold. More pencils are sold than rulers. Knowing this, it says how many pencils were sold:

- a) 40 b) 80 c) 120 d) 140

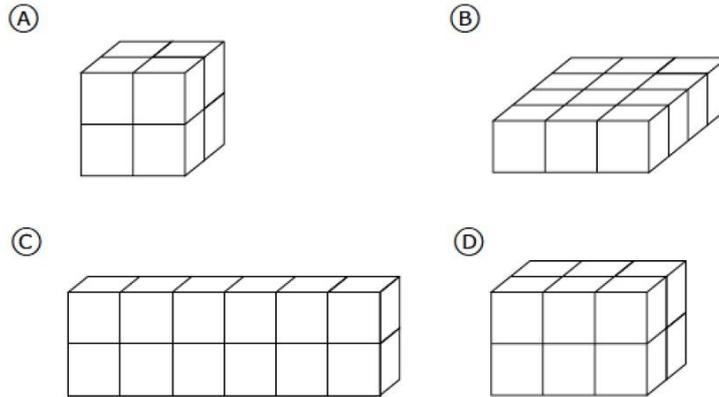


31. Calculate the following expression containing fractions:

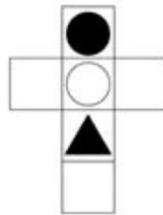
$$\left(\frac{5}{6} \times \frac{3}{4}\right) - \frac{3}{16} = \underline{\hspace{2cm}}$$



32. All the small blocks have the same size. Which stack of blocks has a different volume from the others?.



33. Which of these cubes could be made by folding the figure above them?



34. Complete:

a) $(a^2)^3 = \underline{\hspace{2cm}}$

b) $a^{2+3} = \underline{\hspace{2cm}}$

35. Choose the correct expression:

a) $\sqrt[2]{a^3} = a^{\frac{2}{3}}$

b) $\sqrt[2]{a^3} = a^{\frac{3}{2}}$



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36. If $a = 10$, then $a^2 + 3 =$ _____

37. Considering that $x = 2$ complete the following expressions:

a) $x^2 =$ _____

b) $2x =$ _____

c) $x^2 =$ _____

