

TEST INGRESSO CLASSE TERZA SCUOLA SECONDARIA I GRADO

MATEMATICA

ARITMETICA

Proporzioni e proporzionalità

1.

$x : 90 = 18 : 81$	$x = ?$
$\frac{8}{3} : \frac{4}{5} = \frac{15}{8} : x$	$x = ?$
$x : y = 49 : 56$ and $x + y = 15$	$x = ? y = ?$
$27 : x = x : 12$	$x = ?$
$x : 28 = y : 35$ and $y - x = 4$	$x = ? y = ?$
$x : y = 9 : 2$ and $x \cdot y = 450$	$x = ? y = ?$
$x : y = 15 : 21$ and $x^2 + y^2 = 74$	$x = ? y = ?$

2. Percentuali:

25% of 360 is ...
17% of 210 is ...
50% of 103 is ...
3% of 85 is ...

3. Proporzionalità d (diretta), i (inversa); correlazione lineare

1. $y = 3 \bullet x$

x	0	1	2	3	?	7
y	?	3	?	?	15	?

2. $x \bullet y = 24$

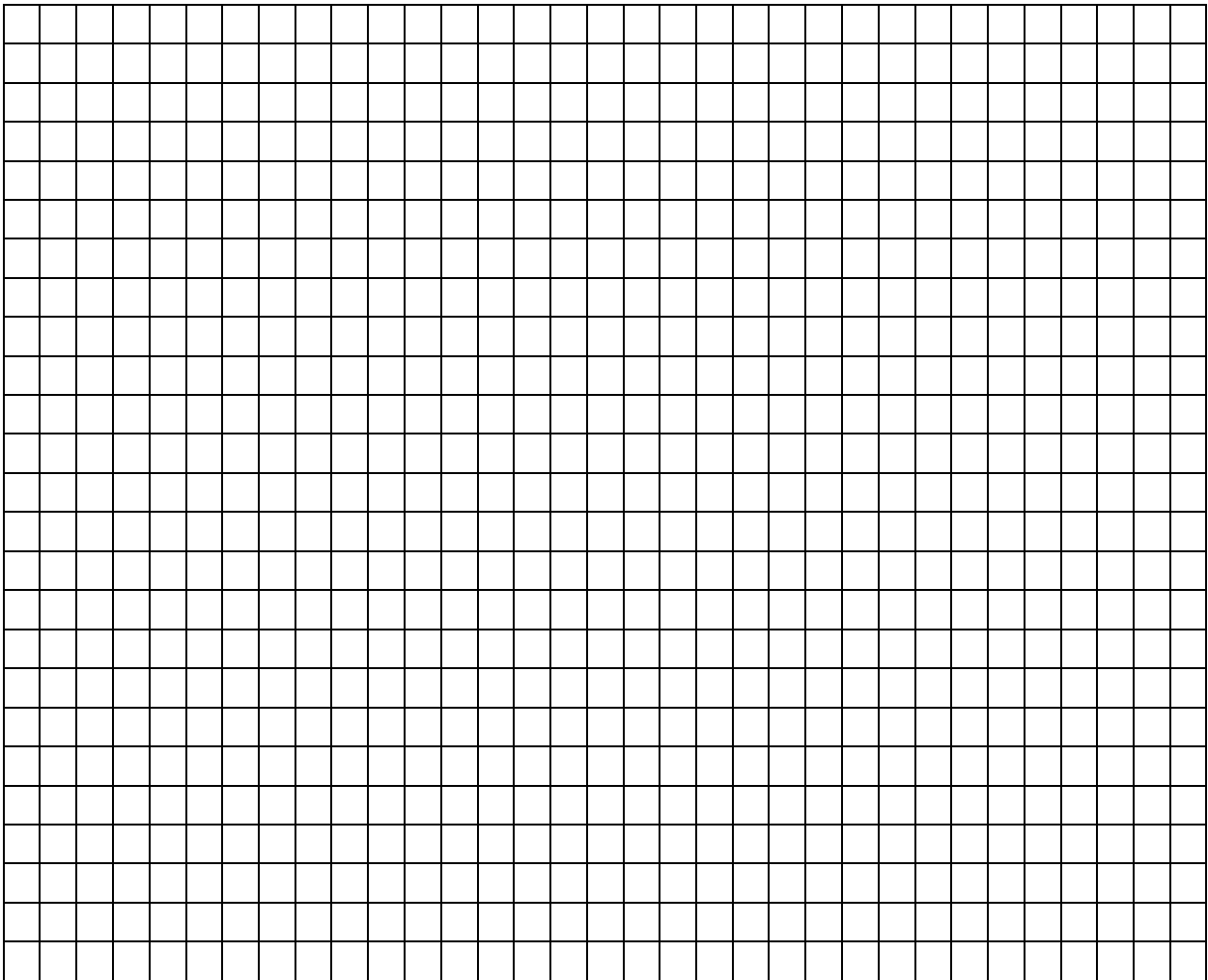
x	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	?	...
y	<u>?</u>	<u>12</u>	<u>?</u>	<u>?</u>	2	...

3. $y = 4 \bullet x - 2$

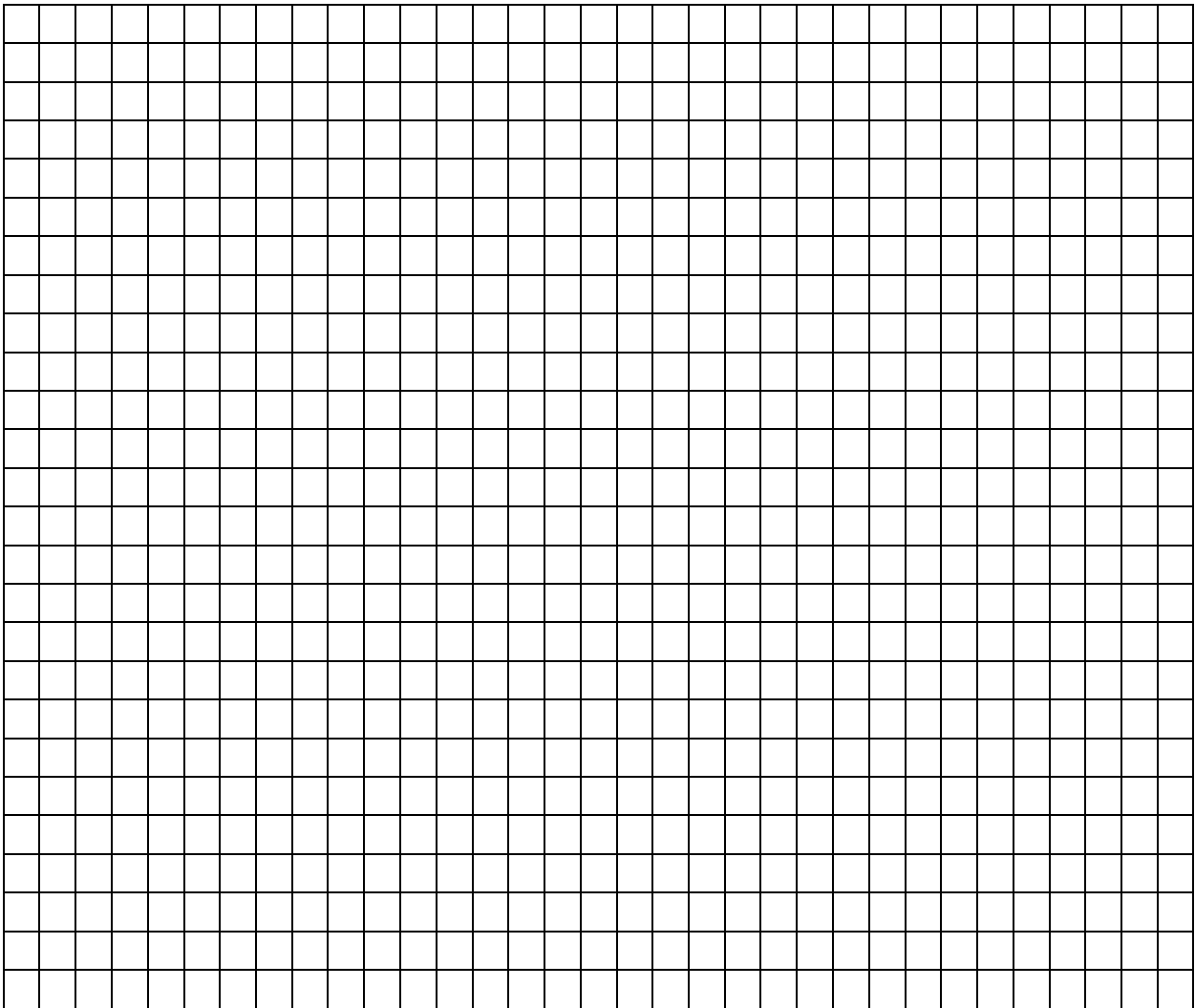
x	0	1	2	3		7
y	?	2	?	?	14	

4.

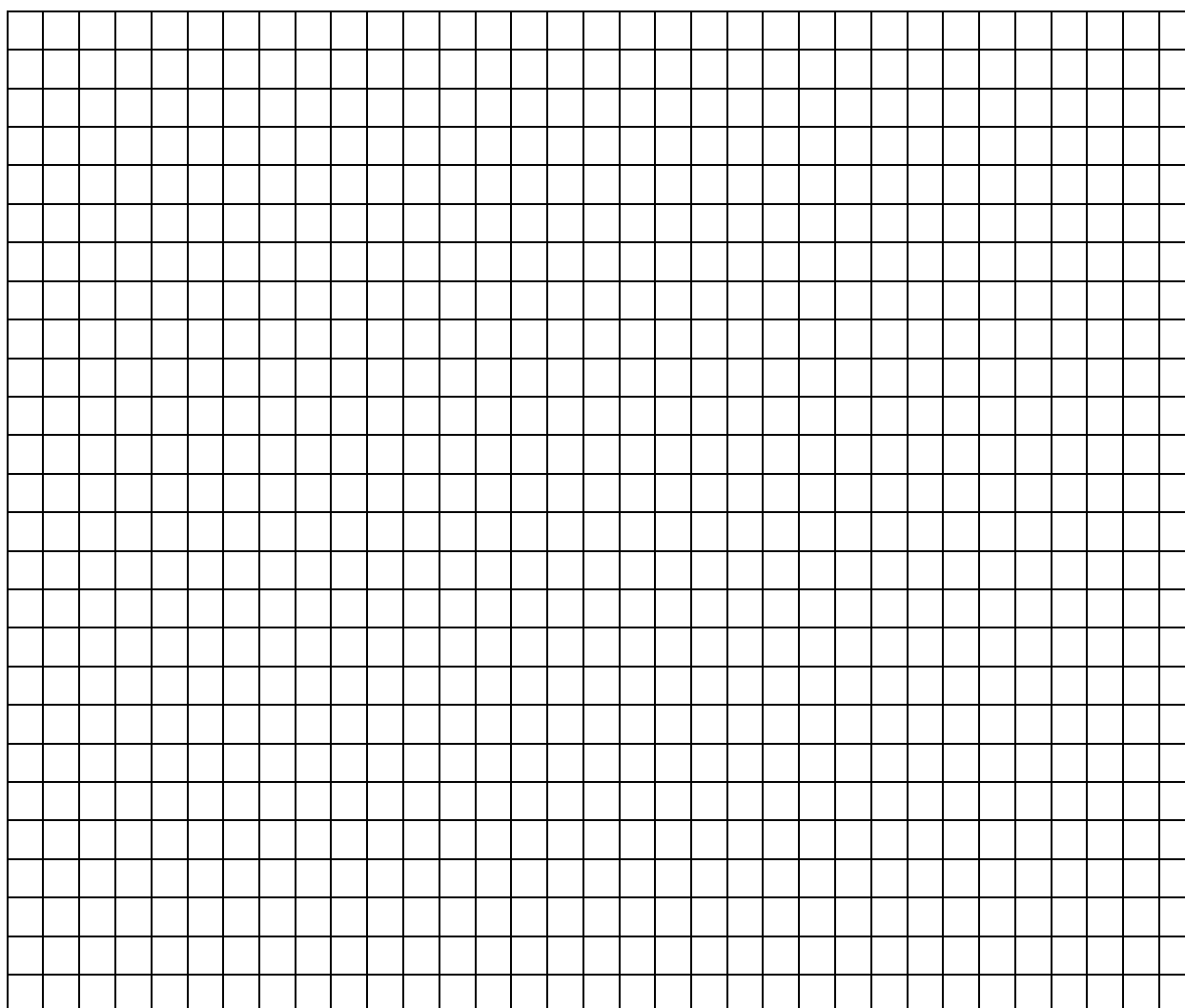
A. Draw $y = 3 \bullet x$



B. Draw $x \bullet y = 24$



c. Draw $y = 4 \bullet x - 2$



Obiettivo: calcolo della radice di un numero (con l'uso delle tavole numeriche)

1. Remember

$$\sqrt[n]{a} = b$$

$$b^n = a$$

$\sqrt[2]{36} =$	$\sqrt[2]{256} =$
$\sqrt[3]{64} =$	$\sqrt[3]{4913} =$
$\sqrt[5]{32} =$	$\sqrt[4]{456976} =$
$\sqrt[2]{\frac{4}{9}}$	$\sqrt[6]{262144}$
$\sqrt[3]{\frac{27}{8}}$	$\sqrt[4]{\frac{625}{2401}}$

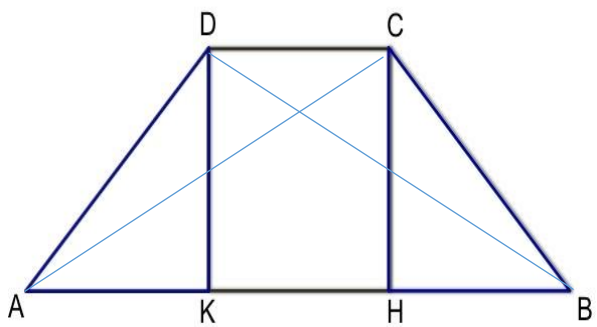
GEOMETRIA

Obiettivo:

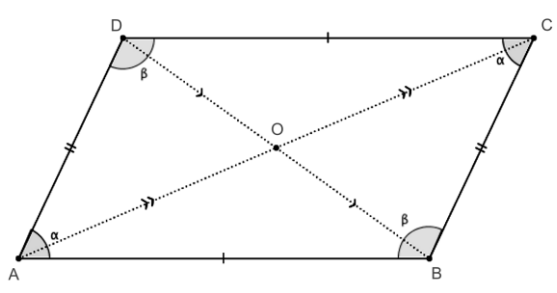
- conoscere formule per il calcolo di aree, perimetri, lati, diagonali di quadrilateri
- conoscere/applicare il teorema di Pitagora a triangoli e quadrilateri

1. Completa o disegna la figura e i dati **evidenziando le proprietà del quadrilatero:**

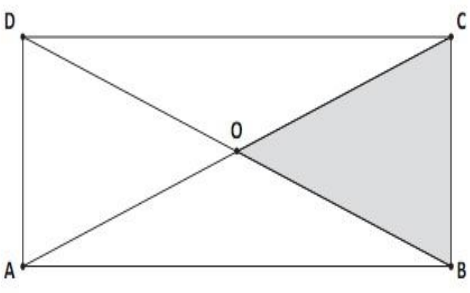
a.

 <p>BC =</p> <p>AC =</p>	<p>$\mathcal{A} =$</p> <p>$2p =$</p> <p>$h =$</p> <p>$B + b =$</p>
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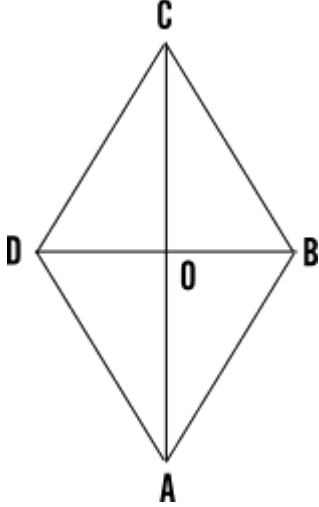
b.

 <p>AB =</p> <p>DA =</p>	<p>$\mathcal{A} =$</p> <p>$h =$</p> <p>$b =$</p> <p>$2p =$</p>
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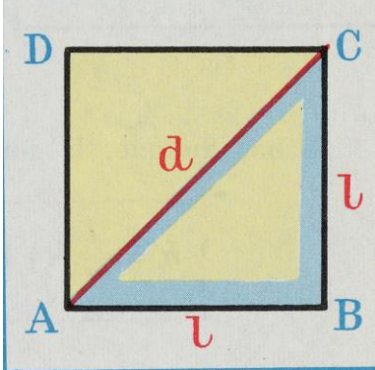
c.

 <p>AB = BC = AC =</p>	<p>$\mathcal{A} =$</p> <p>$2p =$</p> <p>$h = \text{----}$</p> <p>$b =$</p>
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d.

 <p>AB = = =</p> <p>CO = OB = BD \perp</p>	<p>$\mathcal{A} =$</p> <p>$2p =$</p> <p>$AB = \frac{\dots}{4}$</p> <p>$AC = \frac{A \bullet \dots}{\dots}$</p>
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e.

 <p>AB =</p> <p>AC =</p> <p>AC \perp</p>	<p>$\mathcal{A} =$</p> <p>$2p =$</p> <p>$l = \frac{\dots}{4} ; l = \sqrt{\dots}$</p> <p>$d =$</p>
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2. Enunciato del teorema di Pitagora

	$i^2 = \dots\dots\dots$ $c_1^2 = \dots\dots\dots$ $c_2^2 = \dots\dots\dots$ $i = \sqrt{\dots}$ $c =$
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3. Applica il teorema di Pitagora ai triangoli

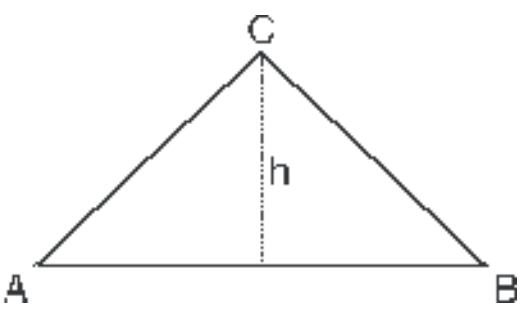
a.

	$AB = 24 \text{ cm}$ $AC = 18 \text{ cm}$ $\mathcal{A} = ?$ $2p = ?$
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b.

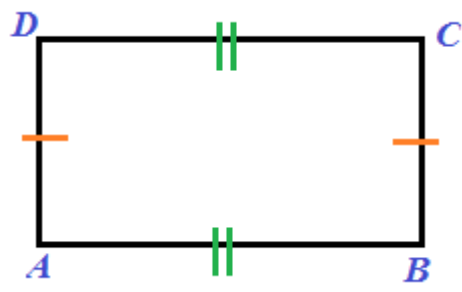
	$AB = 25 \text{ cm}$ $AC = 15 \text{ cm}$ $2p = ?$ $\mathcal{A} = ?$ $CH = ?$
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c.

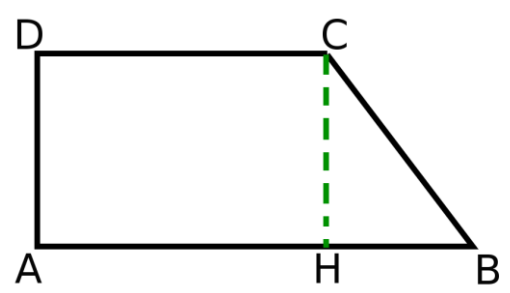
	<p>$AB = 42 \text{ cm}$</p> <p>$BC = 35 \text{ cm}$</p> <p>$\mathcal{A} = ?$</p>
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4. Applica il teorema di Pitagora ai quadrilateri:

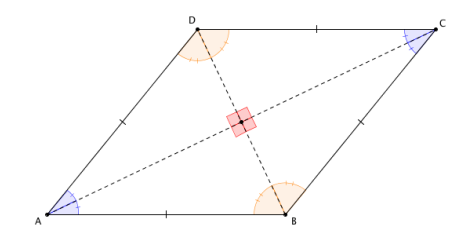
a.

	<p>$2p = 46 \text{ cm}$</p> <p>$BC = 8 \text{ cm}$</p> <p>$\mathcal{A} = ?$</p> <p>$d = AC = ?$</p>
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b.

	<p>$\mathcal{A} = 1800 \text{ cm}^2$</p> <p>$AD = 30 \text{ cm}$</p> <p>$AB = 68 \text{ cm}$</p> <p>$2p = ?$</p>
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c.

	<p>$2p = 104 \text{ cm}$</p> <p>$\mathcal{D} = AC = 48 \text{ cm}$</p> <p>$\mathcal{A} = ?$</p>
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