

Class Notes

Textbook Notes



Name: _____

Period: _____

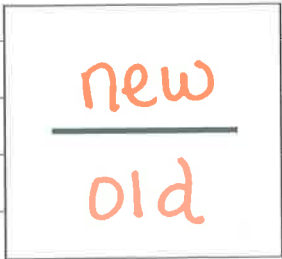
Class: _____

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TOPIC/OBJECTIVE: Scale Factor (dilations)

Essential Question: _____

Questions:	Notes:
What is a dilation?	a transformation that enlarges or reduces a figure.
2 types of dilations	Reduction & Enlargement
What is a scale factor?	ratio used to enlarge or reduce similar figures.
	When a scale factor is < 1 it is a <u>reduction</u> .
	When a scale factor is > 1 it is an <u>enlargement</u> .
How do you apply a scale factor?	you MULTIPLY!!
"A prime"	Ex. 1: A(2,3), B(3,-1/2), C(5, 6) with a scale factor of 2 A' (4, 6), B' (6, -1), C' (10, 12)
	Ex 2: A(1,3), B(3,-6), C(9, 12) with a scale factor of 1/3 A' (1/3, 1), B' (1, -2), C' (3, 4)
How do you find a scale factor:	You put NEW over OLD!



Questions:

Notes:

Ex 3: L(2, 4), M(4, 8), N(8,1)

L'(1, 2), M(2, 4), N(4, 1/2)

What type of dilation? reduction

$$\frac{\text{new}}{\text{old}} = \frac{L'(1, 2)}{L(2, 4)} = \frac{1}{2}$$

What is the scale factor? $\frac{1}{2}$

Ex 4: G(5, 2), H(-3, 3), I(-4, -3), J(-2, 2)

G'(12.5, 5), H'(-7.5, 7.5), I'(-10, -7.5), J'(-5, 5)

What type of dilation? enlargement

$$\frac{\text{new}}{\text{old}} = \frac{G'(12.5, 5)}{G(5, 2)} = \frac{5}{2} = 2.5$$

What is the scale factor? 2.5

$$\frac{12.5}{5} = 2.5$$