

Mathematics

# Decrease by a Percentage

Mr Millar



# Independent task



Order the results in size.

Decrease 300  
by 40%

Increase 150  
by 30%

Decrease 260  
by 20%

Decrease 250  
by 15%

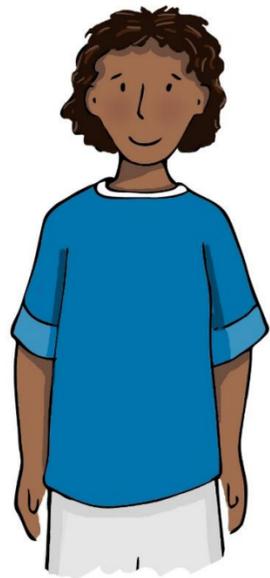
Increase 180  
by 6%

Decrease 200  
by 4%



# Explore

Yasmin and Zaki are arguing over what happens when you increase and then decrease a number by the same amount



If I increase a number by 20%, and then decrease it by 20%, I will get the same number I started with.

I disagree, if you try it with 100 you get a lower number than what you started with



# Answers



# Independent task



Order the results in size.

Decrease 300  
by 40%

$$300 \times 0.6 = 180$$

Increase 150  
by 30%

$$150 \times 1.3 = 195$$

Decrease 260  
by 20%

$$260 \times 0.8 = 208$$

Decrease 250  
by 15%

$$250 \times 0.85 = 212.5$$

Increase 180  
by 6%

$$180 \times 1.06 = 190.8$$

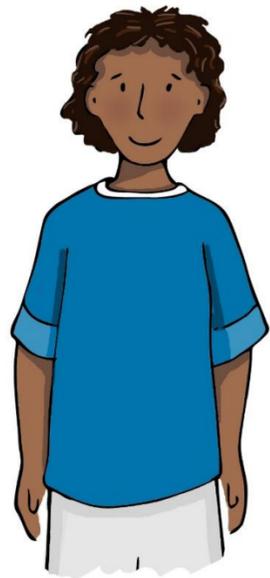
Decrease 200  
by 4%

$$200 \times 0.96 = 192$$



# Explore

Yasmin and Zaki are arguing over what happens when you increase and then decrease a number by the same amount



If I increase a number by 20%, and then decrease it by 20%, I will get the same number I started with.

If you increase 100 by 20% you get 120 ( $100 \times 1.2$ )

If you then decrease 120 by 20% you get 96 ( $120 \times 0.8$ )

Yasmin is correct!

I disagree, if you try it with 100 you get a lower number than what you started with

