



# New Maths GCSE: G25 - Vectors - Parallel or Not?

Name:.....

Date:.....

**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$a + 2b$        $b + 2a$

- A** They are parallel to each other
- B** They are the same length
- C** They are in the opposite direction
- D** They are not parallel

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$a - b$        $b - a$

- A** They are parallel to each other and in the same direction
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are perpendicular to each other

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$a + b$        $b + a$

- A** They are parallel to each other and in the same direction
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are perpendicular to each other

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$$2(a - 2b) \quad -4b + 2a$$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** One vector is twice the length of the other

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$$4a + 3b \quad 5a + 4b$$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$$2a + 5b \quad 4a + 10b$$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$$3(a + 3b) \quad a + 3b$$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$4(a + 2b)$       $4a + 2b$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$3b - a$       $3b + a$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$3(a + b)$       $-2(a + b)$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$3(a - b)$       $-2(b - a)$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$9a + 6b$        $12a + 9b$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$12a - 9b$        $8a - 6b$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$2b - a$        $3a - 6b$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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**a** and **b** are non-parallel, non-identical vectors, of different lengths

What is the relationship between these two vectors?

$6b - 2a$        $4a - 12b$

- A** They are not parallel to each other
- B** They are parallel to each other and in the opposite direction
- C** They are exactly the same vector
- D** They are parallel to each other and in the same direction

Correct Answer: A B C D

Explanation:

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