2.95 Coordinates, Reflection and Translation: 30-minute Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 What are the coordinates of the midpoint of the line joining (-7, -5) and (-1, 1)?

- ☐ A) (6, 6)
- ☐ B) (3, 3)
- ☐ C) (-4, -2)
- ☐ D) (-2, -4)
- ☐ E) (-8, -4)

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2 The point P is at (7, 2). P is translated 5 right and 2 down. What are the new coordinates of P?

- ☐ A) (12, 4)
- ☐ B) (5, -2)
- ☐ C) (12, 0)
- ☐ D) (5, 7)
- ☐ E) (2, 4)

---

3 Three corners of a rectangle are at (0, -3), (5, -3) and (5, 0). What are the coordinates of the fourth corner?

- ☐ A) (0, -6)
- ☐ B) (10, 0)
- ☐ C) (0, 1)
- ☐ D) (1, 0)
- ☐ E) (0, 0)

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4 What are the coordinates of the midpoint of the line joining (-7, 1) and (-7, 7)?

- ☐ A) (4, -7)
- ☐ B) (-6, 4)
- ☐ C) (0, 3)
- ☐ D) (-7, 4)
- ☐ E) (-14, 8)

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5 The point A is at (6, -6). A is reflected in y = -2. What are the new coordinates of A?

- ☐ A) (-6, -6)
- ☐ B) (6, 2)
- ☐ C) (-5, 6)
- ☐ D) (6, 6)
- ☐ E) (-6, 6)

---

6 The point P is at (0, 2). P is translated 3 left and 7 down. What are the new coordinates of P?

- ☐ A) (3, -5)
- ☐ B) (3, 9)
- ☐ C) (-7, -1)
- ☐ D) (-3, -7)
- ☐ E) (-3, -5)

---

7 Three corners of a rectangle are at (9, -3), (9, 3) and (3, 3). What are the coordinates of the fourth corner?

- ☐ A) (3, -3)
- ☐ B) (3, 9)
- ☐ C) (3, -2)
- ☐ D) (15, -3)
- ☐ E) (-3, 3)

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8 What are the coordinates of the midpoint of the line joining (4, -2) and (-6, -6)?

- ☐ A) (-10, -4)
- ☐ B) (-2, -8)
- ☐ C) (-1, -4)
- ☐ D) (0, -4)
- ☐ E) (5, 2)

---

9 The point P is at (-2, 5). P is translated 6 left and 1 down. What are the new coordinates of P?

- ☐ A) (-3, -1)
- ☐ B) (-8, 6)
- ☐ C) (4, 6)
- ☐ D) (-8, 4)
- ☐ E) (4, 4)

---

10 Three corners of a rectangle are at (3, 3), (3, 5) and (0, 5). What are the coordinates of the fourth corner?

- ☐ A) (6, 3)
- ☐ B) (0, 3)
- ☐ C) (0, 7)
- ☐ D) (0, 4)
- ☐ E) (3, 0)

---

11 What are the coordinates of the midpoint of the line joining (0, 3) and (8, -3)?

- ☐ A) (8, -6)
- ☐ B) (5, 0)
- ☐ C) (4, 0)
- ☐ D) (4, 3)
- ☐ E) (8, 0)

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12 The point P is at (6, -5). P is translated 5 right and 1 down. What are the new coordinates of P?

- ☐ A) (11, -6)
- ☐ B) (1, -4)
- ☐ C) (5, 0)
- ☐ D) (11, -4)
- ☐ E) (1, -6)

---

13 Three corners of a rectangle are at (0, -3), (7, -3) and (7, 1). What are the coordinates of the fourth corner?

- ☐ A) (1, 0)
- ☐ B) (0, 2)
- ☐ C) (0, -7)
- ☐ D) (0, 1)
- ☐ E) (14, 1)

---

14 What are the coordinates of the midpoint of the line joining (-7, -5) and (-15, -1)?

- ☐ A) (-3, -11)
- ☐ B) (4, 2)
- ☐ C) (-10, -3)
- ☐ D) (-22, -6)
- ☐ E) (-11, -3)

---

15 The point P is at (-1, 5). P is translated 6 right and 6 up. What are the new coordinates of P?

- ☐ A) (6, 6)
- ☐ B) (5, -1)
- ☐ C) (5, 11)
- ☐ D) (-7, 11)
- ☐ E) (-7, -1)

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16 Three corners of a rectangle are at (0, 6), (0, 1) and (2, 1). What are the coordinates of the fourth corner?

- [ ] A) (3, 6)
- [ ] B) (2, 6)
- [ ] C) (-2, 6)
- [ ] D) (6, 2)
- [ ] E) (2, -4)

---

17 What are the coordinates of the midpoint of the line joining (3, 7) and (5, -1)?

- [ ] A) (4, 3)
- [ ] B) (5, 3)
- [ ] C) (8, 6)
- [ ] D) (1, 4)
- [ ] E) (3, 4)

---

18 The point A is at (6, -5). A is reflected in x = 2. What are the new coordinates of A?

- [ ] A) (-2, -5)
- [ ] B) (-1, -5)
- [ ] C) (-6, 5)
- [ ] D) (6, 5)
- [ ] E) (-5, 6)

---

19 The point P is at (-5, 8). P is translated 1 right and 5 down. What are the new coordinates of P?

- [ ] A) (1, -5)
- [ ] B) (-6, 13)
- [ ] C) (-10, 9)
- [ ] D) (-4, 3)
- [ ] E) (-6, 3)

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20 Three corners of a rectangle are at (0, -2), (7, -2) and (7, 4). What are the coordinates of the fourth corner?

- [ ] A) (0, -8)
- [ ] B) (0, 4)
- [ ] C) (4, 0)
- [ ] D) (0, 5)
- [ ] E) (14, 4)

---

21 What are the coordinates of the midpoint of the line joining (-6, -3) and (0, 1)?

- [ ] A) (3, 2)
- [ ] B) (-6, -2)
- [ ] C) (-2, -1)
- [ ] D) (-1, -3)
- [ ] E) (-3, -1)

---

22 The point P is at (7, 0). P is translated 3 right and 3 down. What are the new coordinates of P?

- [ ] A) (3, -3)
- [ ] B) (10, -3)
- [ ] C) (4, -3)
- [ ] D) (10, 3)
- [ ] E) (4, 3)

---

23 Three corners of a rectangle are at (3, 5), (3, -1) and (7, -1). What are the coordinates of the fourth corner?

- [ ] A) (-1, 5)
- [ ] B) (7, -7)
- [ ] C) (5, 7)
- [ ] D) (8, 5)
- [ ] E) (7, 5)

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24 The point A is at (6, 2). A is reflected in x = 3. What are the new coordinates of A?

- ☐ A) (6, -2)
- ☐ B) (2, 6)
- ☐ C) (-6, -2)
- ☐ D) (0, 2)
- ☐ E) (-6, 2)

---

25 The point P is at (5, -6). P is translated 1 right and 4 up. What are the new coordinates of P?

- ☐ A) (4, -10)
- ☐ B) (1, 4)
- ☐ C) (6, -2)
- ☐ D) (6, -10)
- ☐ E) (9, -5)

---

26 Three corners of a rectangle are at (1, 3), (1, 7) and (-2, 7). What are the coordinates of the fourth corner?

- ☐ A) (-2, 4)
- ☐ B) (3, -2)
- ☐ C) (-2, 11)
- ☐ D) (-2, 3)
- ☐ E) (4, 3)

---

27 The point A is at (5, -7). A is reflected in the x-axis. What are the new coordinates of A?

- ☐ A) (5, 7)
- ☐ B) (-4, -7)
- ☐ C) (-5, 7)
- ☐ D) (-7, 5)
- ☐ E) (-5, -7)

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28 The point P is at (3, 2). P is translated 1 right and 6 up. What are the new coordinates of P?

- ☐ A) (1, 6)
- ☐ B) (2, 8)
- ☐ C) (4, 8)
- ☐ D) (9, 3)
- ☐ E) (2, -4)

---

29 Three corners of a rectangle are at (-3, 3), (-3, -3) and (4, -3). What are the coordinates of the fourth corner?

- ☐ A) (4, 4)
- ☐ B) (4, -9)
- ☐ C) (-10, 3)
- ☐ D) (5, 3)
- ☐ E) (4, 3)

---

30 What are the coordinates of the midpoint of the line joining (8, 4) and (16, 4)?

- ☐ A) (24, 8)
- ☐ B) (8, 0)
- ☐ C) (4, 12)
- ☐ D) (4, 0)
- ☐ E) (12, 4)

---

31 Point F is at (-2, 6).

(a) Reflect F in the x-axis and give the coordinates of the image. **(1)**

(b) Then translate the image by (-3, -2) and give the coordinates after this step. **(1)**

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Question 1

correct option C ((-4, -2)) cao **B1**

Answer: C) (-4, -2)

Question 2

correct option C ((12, 0)) cao **B1**

Answer: C) (12, 0)

Question 3

correct option E ((0, 0)) cao **B1**

Answer: E) (0, 0)

Question 4

correct option D ((-7, 4)) cao **B1**

Answer: D) (-7, 4)

Question 5

correct option B ((6, 2)) cao **B1**

Answer: B) (6, 2)

Question 6

correct option E ((-3, -5)) cao **B1**

Answer: E) (-3, -5)

Question 7

correct option A ((3, -3)) cao **B1**

Answer: A) (3, -3)

Question 8

correct option C ((-1, -4)) cao **B1**

Answer: C) (-1, -4)

Question 9

correct option D ((-8, 4)) cao **B1**

Answer: D) (-8, 4)

Question 10

correct option B ((0, 3)) cao **B1**

Answer: B) (0, 3)

Question 11

correct option C ((4, 0)) cao **B1**

Answer: C) (4, 0)

Question 12

correct option A ((11, -6)) cao **B1**

Answer: A) (11, -6)

Question 13

correct option D ((0, 1)) cao **B1**

Answer: D) (0, 1)

Question 14

correct option E ((-11, -3)) cao **B1**

Answer: E) (-11, -3)

Question 15

correct option C ((5, 11)) cao **B1**

Answer: C) (5, 11)

Question 16

correct option B ((2, 6)) cao **B1**

Answer: B) (2, 6)

Question 17

correct option A ((4, 3)) cao **B1**

Answer: A) (4, 3)

Question 18

correct option A ((-2, -5)) cao **B1**

Answer: A) (-2, -5)

Question 19

correct option D ((-4, 3)) cao **B1**

Answer: D) (-4, 3)

Question 20

correct option B ((0, 4)) cao **B1**

Answer: B) (0, 4)

Question 21

correct option E ((-3, -1)) cao **B1**

Answer: E) (-3, -1)

Question 22

correct option B ((10, -3)) cao **B1**

Answer: B) (10, -3)

Question 23

correct option E ((7, 5)) cao **B1**

Answer: E) (7, 5)

Question 24

correct option D ((0, 2)) cao **B1**

Answer: D) (0, 2)

Question 25

correct option C ((6, -2)) cao **B1**

Answer: C) (6, -2)

Question 26

correct option D ((-2, 3)) cao **B1**

Answer: D) (-2, 3)

Question 27

correct option A ((5, 7)) cao **B1**

Answer: A) (5, 7)

Question 28

correct option C ((4, 8)) cao **B1**

Answer: C) (4, 8)

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Question 29

correct option E ((4, 3)) cao **B1**

Answer: E) (4, 3)

Question 30

correct option E ((12, 4)) cao **B1**

Answer: E) (12, 4)

Question 31

(a) (-2, -6) cao **B1**

(a) Answer: (-2, -6)

(b) (-5, -8) cao **B1**

(b) Answer: (-5, -8)

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