EduSahara™ Learning Center Assignment

Grade : Class X, SSC
Chapter : Coordinate Geometry
Name : Geometric Figure Properties and Collinearity

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1. The points $(0,\ 8)$, $(\ 7\ ,\ 6)$ and $((\ \frac{7}{2} + \sqrt{3}\ ),(\ 7 + \frac{7}{2}\ \sqrt{3}\ ))$ represent

   (i) right angled triangle (ii) scalene triangle
   (iii) isosceles triangle (iv) equilateral triangle

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2. The points $((-1),\ 2)$, $((-5),(-7))$ and $((-\frac{111}{10}),\ \frac{11}{10})$ represent

   (i) scalene triangle (ii) right angle triangle
   (iii) isosceles triangle (iv) collinear points
   (v) equilateral triangle

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3. The points $((-5),(-5))$, $((-2),(-1))$, $(\ 2\ ,(-4))$ and $((-1),(-8))$ represent

   (i) square (ii) rhombus
   (iii) trapezium (iv) parallelogram
   (v) rectangle

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4. The points $((-3),(-1))$, $(\ 3\ ,(-1))$, $(\ 7\ ,\ 4\ )$ and $(\ 1\ ,\ 4\ )$ represent

   (i) trapezium (ii) rectangle
   (iii) parallelogram (iv) rhombus
   (v) square

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5. The points $((-5),(-6))$, $(\ 1\ ,(-6))$, $(\ 1\ ,(-1))$ and $((-5),(-1))$ represents

   (i) rhombus (ii) trapezium (iii) square (iv) parallelogram (v) rectangle

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6. The points $((-1),\ 6)$, $(\ 2\ ,\ 5\ )$ and $(\ 4\ ,(-8))$ represent

   (i) collinear points
   (ii) equilateral triangle
   (iii) right angle triangle
   (iv) scalene triangle
   (v) isosceles triangle

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7. The points $((-4),(-6))$, $((-1),(-3))$ and $(\ 2\ ,(-6))$ represent

   (i) right angle triangle (ii) collinear points
   (iii) equilateral triangle (iv) isosceles right angled triangle

(v) scalene triangle

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8. The points $((-2),(-2))$, $(4,(-2))$ and $(4, 2)$ represent

(i) scalene triangle (ii) isosceles right angled triangle
(iii) right angle triangle (iv) equilateral triangle
(v) collinear points

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9. The points $((-2),(-4))$, $(3,(-8))$, $(8,(-4))$ and $(3,0)$ represent

(i) parallelogram (ii) rectangle (iii) square (iv) trapezium (v) rhombus

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10. The points $(0,(-2))$, $(0, 2)$ and $(0,0)$ represents

(i) equilateral triangle (ii) collinear points
(iii) right angle triangle (iv) isoceles triangle

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11. Find the value of k such that the points $((-9), 8)$, $((-5), \frac{29}{4})$ and (k,5) are collinear

(i) 10 (ii) 5 (iii) 8 (iv) 7 (v) 6

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12. Find the value of k such that the points $((-7),(-4))$, $((-5), \frac{4}{3})$ and (-4,k) are collinear

(i) 7 (ii) 5 (iii) 4 (iv) 1 (v) 3

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13. Which of the following sets of points are collinear?

(i) $(1,(-4)),(8,0),(5,(-3))$

(ii) $(5,0),(0,(-1)),(0,(-6))$

(iii) $(1,(-4)),(3,(-5)),(1,(-4))$

(iv) $((-4), 5),((-3), 8),((-4),(-4))$

(v) $(6,(-7)),(3, 3),(2, 1)$

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14. Find the area of the quadrilateral formed by $((-1),0)$, $(5, 4)$, $(0, 7)$ and $((-2), 6)$

(i) $\frac{51}{2}$ (ii) $\frac{49}{2}$ (iii) $\frac{53}{2}$ (iv) 51 (v) $\frac{51}{4}$

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15. Find the relation between x and y if the points (x, y), $((-5), 3)$ and $(4, 2)$ are collinear

(i)

$(5x + 4y - 28) = 0$

(ii) $(-x - 9y + 22) = 0$

(iii) $(-2x + 7y - 6) = 0$

(iv) $(-3x - 2y - 9) = 0$

(v) $(7x - 3y + 21) = 0$

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16. Find the area of the triangle formed by the points $(3, (-2))$, $(5, 4)$ and $((-8), 8)$

(i) 42 (ii) 41 (iii) 44 (iv) 43 (v) 46

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17. Find the perimeter of the triangle formed by the points $(6, (-1))$, $(6, (-2))$ and $((-3), (-5))$

(i) $(1 + 3\sqrt{13} + \sqrt{97})$ (ii) $(1 + 3\sqrt{10} + \sqrt[4]{97})$

(iii) $(1 + 3\sqrt{7} + \sqrt{97})$ (iv) $(1 + 3\sqrt{10} + \sqrt{97})$

(v) $(1 + 3\sqrt{10} + 97)$

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18. Find the lengths of the sides of the triangle formed by the points $((-5), (-2))$, $((-4), 1)$ and $((-2), 3)$

(i) $\sqrt{10}$, $2\sqrt{2}$, $\sqrt{36}$

(ii) $\sqrt[4]{10}$, $2\sqrt{2}$, $\sqrt{34}$

(iii) $\sqrt{10}$, $2\sqrt{2}$, $\sqrt{34}$

(iv) $\sqrt{10}$, 4 , $\sqrt{34}$

Assignment Key

1) (iv)
2) (iii)
3) (i)
4) (iii)
5) (v)
6) (iv)
7) (iv)
8) (iii)
9) (v)
10) (ii)
11) (iv)
12) (iii)
13) (iii)
14) (i)
15) (ii)
16) (iv)
17) (iv)
18) (iii)