Answers Sheet

Gradient of a Line

1. m = -1
2. m =-3
3. m = 1 / 2
4. m = -1
5. m = 3
6. m = 1 / 2

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7. (1, 2) (10, 5)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

m = (5 – 2) / (10 – 1)

m = 3 / 9

m = 1 / 3

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8. (6 , 4) (9, 3)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

m = 3 – 4 / 9 – 6
m = -1 / 3

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9. (-4, 2) (4, 8)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

m = 8 – 2 / 4 – (-4)
m = 6 / 8
m = 3 / 4

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10. (2, 8) (0, 10)

m = 10 – 8 / 0-2
m = 2 / -2
m = - 1

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11. (1, – 1) (-7, -9)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

m = -9 – (-1) / -7 -1
m = -8 / -8
m = 1

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12. (7, 2) (4, -4)
m = -4 -2 / 4 – 7
m = -6 / -3
m = 2

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13. (5, -3) (-1, 9)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

m = 9 – (-3) / -1 -5
m = 12 / -6
m = -2

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14. (-1, -2) (-5, 7)
m = 7 – (-2) / -5 – (-1)
m = 9 / -4

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15. (1, -2) (-6, 9)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

m = 9 – (-2) / -6 – 1
m = 11 / -7

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16. A (-2, 3) (k, 15)
4 = 15 – 3 / k – (-2)
4 = 12 / (k + 2)
4 (k + 2) = 12
k + 2 = 12 / 4
k + 2 = 3
k = 3 – 2
k = 1

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17. A (5, -3) (2, k)
6 = k – (-3) / 2 – 5
6 = (k + 3) / -3
6 × (-3) = k + 3
-18 = k + 3
k = - 18 – 3
k = -21

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18. A (-2, 4) (8, k)
3 = (k – 4) / (8 – (-2))
3 = k – 4 / 10
10 × 3 = k – 4
30 = k – 4
k = 34