★ This summer assignment is intended to prepare you for the math course above.
★ You will find examples and video links to help you complete the practice.

Skill 1: Factoring

Helpful Video Link:
➔ Factoring

Practice: Factor each completely.

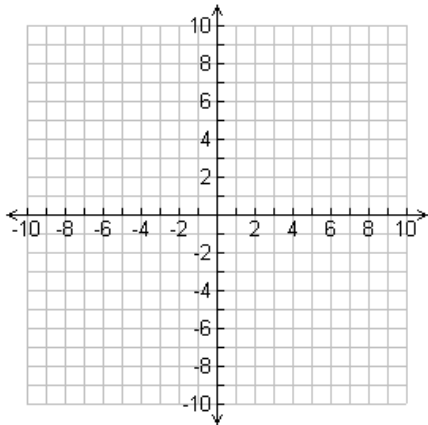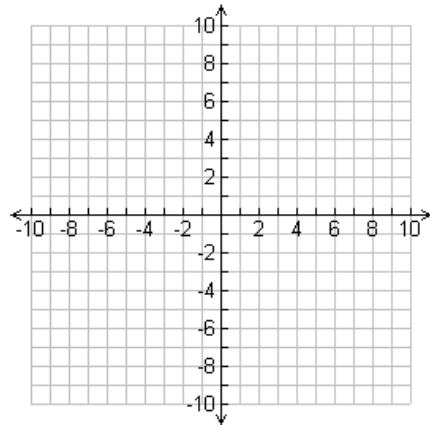|		
1) $x^2 + 6x - 7$	2) $x^2 + 9x + 14$	3) $x^2 - 3x - 40$
4) $x^2 - 4x + 3$	5) $x^2 - 16$	6) $4x^2 - 9$

Skill 2: Graphing Linear Functions

Helpful Video Link:
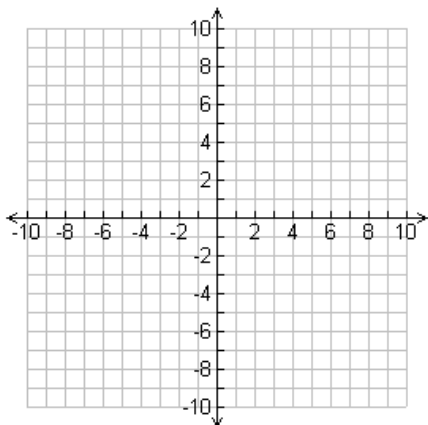→ Graphing Linear Functions

Practice: Graph the given lines.
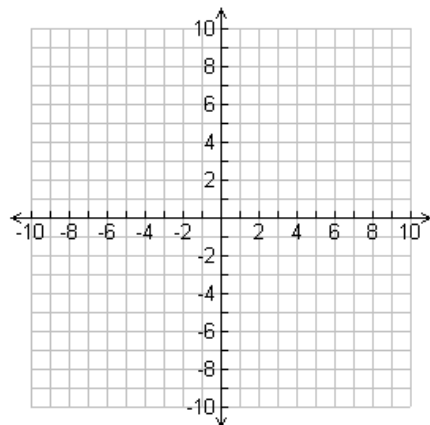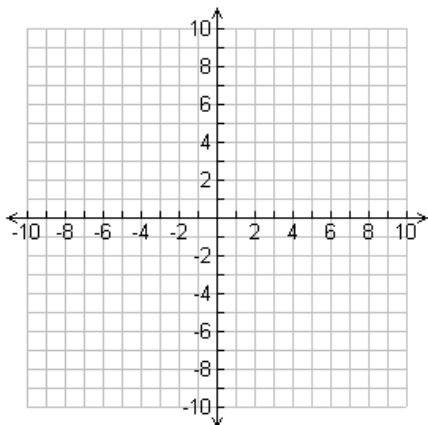
1) $y - 3 = 3(x + 1)$
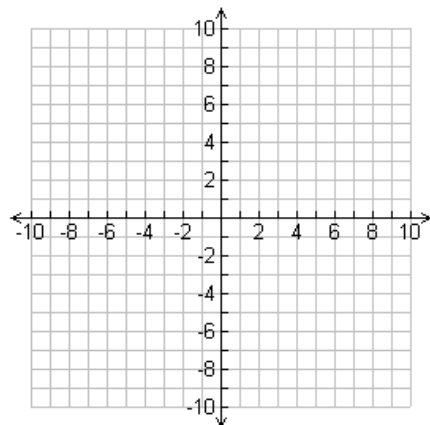
2) $y + 2 = (x - 1)$

3) $y = \frac{1}{2}x + 3$

4) $y = -4x - 5$

5) $2x + y = 4$

6) $-5x - 2y = 10$

Skill 3: Solving multi-step linear equations

Helpful Video Link:
→ Solving Multi-Step Linear Equations

Practice: Solve each equation.

1) $-3x + 8 + 7x = -16$	2) $7(5 + k) = 0$	3) $4(8 + 2x) + 8 = 80$
4) $6m + 6 = 2m + 4m$	5) $11 + 8p = p + 4$	6) $-10 + 6 + 5x - 5 = x - 5$

Skill 4: Average Rate of Change

Practice: Identify the average rate of change.

1) $y = \frac{3}{2}x - 1$	2) $y = 1$	3) $3x - 8y = -32$
4) $x = 5$	5) $(-7, -8)$ and $(4, -18)$	6) $(6, 13)$ and $(13, 0)$

Skill 5: Polynomial Operations

Practice: Simplify the following.

1) $(3x^2 - 2x + 1) - (4x + 2x^2)$	4) $(3x + 5)^2$
2) $(3x - 1)(4x + 5)$	5) $(-2x^5 - 3x^3 + 4x) - (3x^3 + 2x^3 + 1)$
3) $(5x^4 - 3x + 2) + (3x^3 - x^4 - 4)$	6) $(4x^2 - 5 + 2x) + (3x^3 + 5x^2 - 4)$