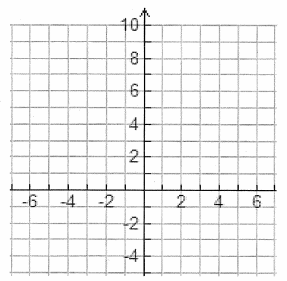
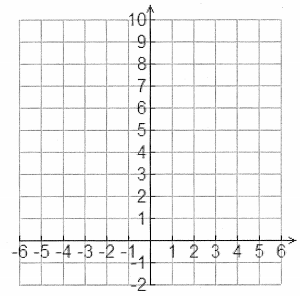
1. Sketch the graph of then sketch, and by applying the transformations.

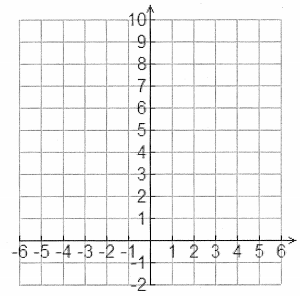
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Domain | Range | *y­*-intercept | Asymptote |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**2.** Sketch the graph of, g and



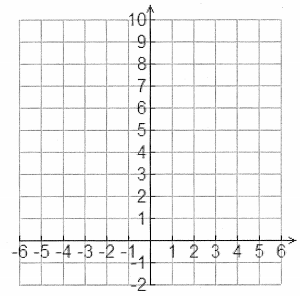
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Domain | Range | *y­*-intercept | Asymptote |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**3.** Sketch the graph of



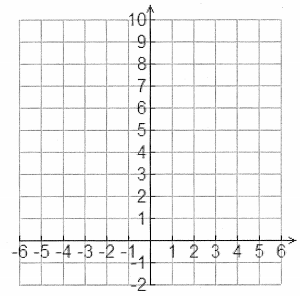
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Domain | Range | *y­*-intercept | Asymptote |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**4. S**ketch the graph of

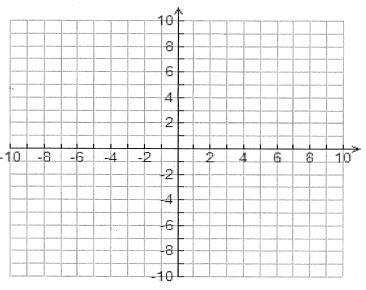


|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Domain | Range | *y­*-intercept | Asymptote |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Use the graph of



5. **a.** Use the graph of

**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Domain | Range | *y­*-intercept | Asymptote |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**6. State** the MAPPING NOTATION, and then **describe** the transformations:

**a.**

**b.**

|  |
| --- |
| **General form of transformed exponential function:**  **Effect of :**  ***a: when* i) *, it is a vertical stretch by a factor of***  ***ex:*** y = 2[3x]  **ii) *, it is a vertical compression by a factor of ex:*** y = 0.5[3x]  y coordinate  **iii)  *, it is a vertical reflection ex:*** y = -2[3x]    ***c: when , vertical shift “c” units up ex:*** y = 2[3x] + 1  ***, vertical shift “c” units down ex:*** y = 2[3x] - 1  ***k: when , it is a horizontal compression by a factor of ex:*** y = 32x  x coordinate  ***, it is a horizontal stretch by a factor of ex:*** y = 31/2x  ***d: when , horizontal shift “d” units right ex:*** y = 32(x - 2)  REMEMBER TO FACTOR  ***, horizontal shift “d” units left ex:*** y = 32(x + 2)  ***b: when , it is an exponential GROWTH ex:*** y = 2[3x]  ***, it is an exponential DECAY ex:*** y = (1/3)x |