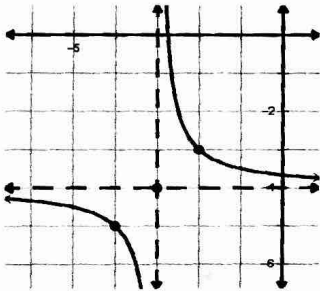
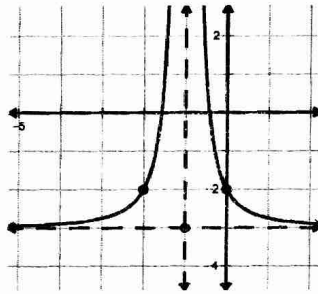


Rational Functions Transformations, Day 2 - Answers

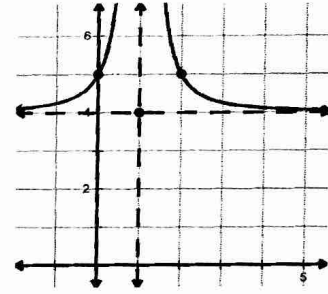
1. Parent: $y = \frac{1}{x}$
 left 3, down 4
 D: $(-\infty, -3) \cup (-3, \infty)$
 R: $(-\infty, -4) \cup (-4, \infty)$
 Asymp: $x = -3, y = -4$



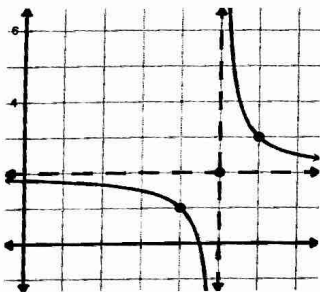
2. Parent: $y = \frac{1}{x^2}$
 left 1, down 3
 D: $(-\infty, -1) \cup (-1, \infty)$
 R: $(-3, \infty)$
 Asymp: $x = -1, y = -3$



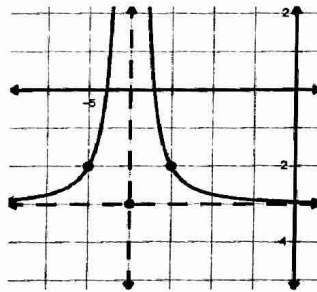
3. Parent: $y = \frac{1}{x^2}$
 right 1, up 4
 D: $(-\infty, 1) \cup (1, \infty)$
 R: $(4, \infty)$
 Asymp: $x = 1, y = 4$



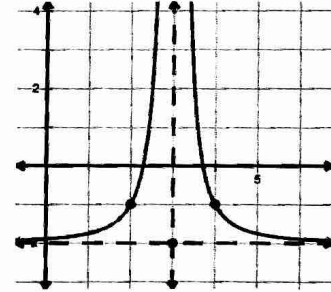
4. Parent: $y = \frac{1}{x}$
 right 5, up 2
 D: $(-\infty, 5) \cup (5, \infty)$
 R: $(-\infty, 2) \cup (2, \infty)$
 Asymp: $x = 5, y = 2$



5. Parent: $y = \frac{1}{x^2}$
 left 4, down 3
 D: $(-\infty, -4) \cup (-4, \infty)$
 R: $(-3, \infty)$
 Asymp: $x = -4, y = -3$



6. Parent: $y = \frac{1}{x^2}$
 right 3, down 2
 D: $(-\infty, 3) \cup (3, \infty)$
 R: $(-2, \infty)$
 Asymp: $x = 3, y = -2$



7. $f(x) = \frac{1}{(x-4)^2} + 3$
 Right 4 up 3

8. $f(x) = \frac{1}{x} + 4$

9. $f(x) = \frac{1}{(x+1)^2}$
 left 1 no up/down

10. $f(x) = \frac{1}{x-2} - 3$