Extra Practice for Quiz

For 1-6, state what the parent fcn is, what a, b, h + k are. Then describe the transformations of a, b, h + k.

1. $y = \frac{5}{3}\cos(\frac{1}{2}x) + 2$

2. $y = -8\left|\frac{1}{3}(x+1)\right| - 7$

3. $y = \sqrt[3]{\frac{1}{4}(x+7)}$

4. $y = \frac{6}{(-(x-1))^4} + 10$

5. $y = -\log(-x) - 3$

6. $y = \frac{1}{3}(x-8)^2 + 2$

For 7-10, tell what a, b, h + k are. Then write the equation with a, b, h, k filled in.

7. Parent: $y = \sin x$ Transformations: Vertical shrink of $\frac{1}{2}$, horizontal reflection, translation 2L, 3U

8. Parent: $y = \sqrt{x}$: Vertical stretch of 5, horizontal stretch of 2, translation 3L, 3D

9. Parent: $y = \frac{1}{x^5}$: Vertical reflection, vertical shrink of $\frac{2}{3}$ horizontal reflection, horizontal shrink of $\frac{2}{3}$ translation 3U and 4L

10. Parent: $y = x$: Vertical reflection, vertical stretch of 8, translation 4D

TIPC

EXTRA PRACTICE ANSWERS

Parent $y = \cos x$

1. $a = 5/3$	vertical stretch of $5/3$
$b = 1/2$	horizontal stretch of 2
$h = 0$	—
$k = 2$	translation 2U

Parent: $y = |x|$

2. $a = -8$	Vertical reflection, vertical stretch of 8
$b = 1/3$	horizontal stretch of 3
$h = -1$	translation 1L
$k = -7$	translation 7D

3 Parent: $y = \sqrt[3]{x}$

$a = 1$	—
$b = 1/4$	horizontal stretch of 4
$h = -7$	translation 7L
$k = 0$	—

4. Parent: $y = 1/x^4$

$a = 6$	vertical stretch of 6
$b = -1$	horizontal reflection
$h = 1$	translation 1R
$k = 10$	translation 10U

5. $y = \log x$ (Parent)

$a = -1$	vertical reflection
$b = -1$	horizontal reflection
$h = 0$	—
$k = -3$	translation 3D

6. Parent $y = x^2$

$a = -1/3$	vertical reflection, vertical shrink of $1/3$
$b = 1$	—
$h = 8$	translation 8R
$k = 2$	translation 2U

7. $a = 1/2$, $b = -1$, $h = -2$, $k = 3$

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

8. $a = 5$, $b = 1/2$, $h = -3$, $k = -3$

$$y = 5\sqrt{\frac{1}{2}(x+3)} - 3$$

9. $a = -2/3$, $b = -3/2$, $h = -4$, $k = 3$

$$y = \frac{-2}{3(-3/2(x+4))^5} + 3$$

10. $a = 8$, $b = -$, $h = -$, $k = -4$

$$y = 8x - 4$$