1. 2*f(x) does what to heights?

Doubles outputs

Answer: stretches taller (x2)

2. (1/2)*f(x) does what?

Halves outputs

Answer: shrinks shorter

3. y = 3x^2 vs y = x^2: which is narrower?

Bigger a

Answer: 3x^2

4. The point (2, 4) is on y = x^2. Where is it on y = 3*f(x)?

y x 3

Answer: (2, 12)

5. -2*f(x): describe two effects.

Flip and stretch

Answer: flip over x-axis AND stretch x2

6. Which is taller at x = 1: y = 5x^2 or y = x^2?

5(1) vs 1

Answer: 5x^2

7. y = (1/4)x^2: taller or shorter than parent, and does it open up?

|1/4|<1; positive

Answer: shorter (wider); opens up

8. Point (3, 2) is on y = f(x). Find its image on y = -3*f(x).

y x -3

Answer: (3, -6)

9. A parabola through (0,0) and (2, 12) has form y = a*x^2. Find a, and is it narrower than y = x^2? ★ challe

12 = a(4)

Answer: a = 3; narrower

10. y = a*f(x) sends (4, 5) to (4, -15). Find a and describe the transformation. ★ challenge

-15 / 5

Answer: a = -3; flip + stretch x3