

36. **CHALLENGE** A doctor measures an astronaut's pulse rate y (in beats per minute) at various times x (in minutes) after the astronaut has finished exercising. The results are shown in the table. The astronaut's resting pulse rate is 70 beats per minute. Write an exponential model for the data.

x	0	2	4	6	8	10	12	14
y	172	132	110	92	84	78	75	72



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW

Lesson 4.3;
TAKS Workbook

37. **TAKS PRACTICE** A poster is 8 inches taller than it is wide. The area of the poster is 384 square inches. Which equation can be used to find the width of the poster? **TAKS Obj. 10**

- (A) $x + 8 = 384$ (B) $x(x + 8) = 384$
(C) $x^2 + (x + 8)^2 = 384^2$ (D) $x + (x + 8) = 384$

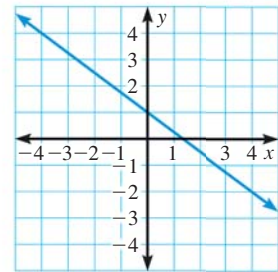


REVIEW

Lesson 2.3;
TAKS Workbook

38. **TAKS PRACTICE** Use the graph of $y = -\frac{3}{4}x + 1$ to solve the equation for x when $y = -2$. **TAKS Obj. 4**

- (F) $x = 3$ (G) $x = 4$
(H) $x = 8$ (J) $x = 11$



QUIZ for Lessons 7.6–7.7

Solve the equation. Check for extraneous solutions. (p. 515)

1. $2^{x+1} = 16^{x+2}$ 2. $e^{-x} = 4$ 3. $3^{2x} + 5 = 13$
4. $3^{x+1} - 5 = 10$ 5. $\log_4(4x + 7) = \log_4 11x$ 6. $\ln(3x - 2) = \ln 6x$
7. $\log_3 x = -1$ 8. $6 \ln x = 30$ 9. $\log_2(x + 4) = 5$

Write an exponential function $y = ab^x$ whose graph passes through the given points. (p. 529)

10. (1, 5), (2, 30) 11. (1, 4), (2, 32) 12. (2, 15), (3, 45)

Write a power function $y = ax^b$ whose graph passes through the given points. (p. 529)

13. (4, 8), (9, 23) 14. (3, 12), (10, 36) 15. (5, 4), (11, 51)

16. **BIOLOGY** The average weight y (in kilograms) of an Atlantic cod from the Gulf of Maine can be modeled by $y = 0.51(1.46)^x$ where x is the age of the cod (in years). Estimate the age of a cod that weighs 15 kilograms. (p. 515)