

3.2-3.3 Re-Teach Worksheet

Name _____

Intermediate Algebra

3.2 *I can use tables and graphs to solve exponential equations including real-world situations and translate between representations.*

3.2 *I can evaluate exponential functions in the form $y = ab^x$ and relate the meaning of the context of a real-world situation.*

Use the following exponential functions to answer questions 1-4.

$$f(x) = 5^x$$

$$g(x) = 3 \cdot 3^{x+1}$$

$$h(x) = 7 \left(\frac{1}{3}\right)^{x-1}$$

1. Find $f(6)$

3. Find $f(x) = 3$

2. Find $g(-1)$

4. Find $h(3)$

5. Use your graphing calculator to solve the following problems.

a) $3^{x-4} = 6$

b) $4^{x-2} = 18$

6. The table below shows the amount of money in your savings account. You earn 3% interest annually. Use the table below to answer the following questions:

Years	Savings Account
0	\$800
5	\$927.42
10	\$1,075.13
15	\$1,246.37
20	\$1,444.89
25	\$1,675.02

a) How much did you originally deposit?

b) About how long does it take to **earn** \$275 from interest?

c) After how many years will you have \$1,500 in your account?

d) How much money have you **earned** from interest after 20 years?

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7. The Cherry and The Spoon is a very popular place to visit in Minneapolis. This sculpture is worth \$4500 and appreciating at a rate of 6.5% a year. The Cherry and The Spoon's value can be modeled by $f(x) = 4500(1.065)^x$

a. What is the value of The Cherry and The Spoon after 12 years?

b. Find how many years until The Cherry and The Spoon is worth at least \$16,000.

8. Rachel just put \$3000 into a savings account that pays 7% interest each year This situation can be modeled by the equation $f(t) = 3000(1 + .07)^t$.

a. How much does Rachel have in his account after 11 years?

b. Rachel needs \$20,000 in his account before she can think about buying a second home on a lake in northern Minnesota. How long does Rachel need to wait in order to look for her second home on the lake.

9. Use the graph to find the solutions to $\frac{1}{4}^x = 16$

Solution: _____

Check: _____

