Station 6

Identify the initial amount *a* and the growth factor *b* in each exponential function.

1. $f(x) = 3 \cdot 5^x$

a = 3, b = 5

Identify the initial amount *a* and the growth factor *b* in each exponential function.

2. $y = 250 \cdot 1.065^x$

a = 250, b = 1.065

Identify the initial amount *a* and the growth factor *b* in each exponential function.

3. $g(t) = 3.5^t$

a = 1, b = 3.5

Identify the initial amount *a* and the growth factor *b* in each exponential function.

4. $h(x) = 5 \cdot 1.02^x$

a = 5, b = 1.02

Find the balance in each account after the given period.

5. $8000 principal earning 5% compounded annually, after 6 yr $10,720.77

Find the balance in each account after the given period.

6. $2000 principal earning 5.4% compounded annually, after 4 yr $2468.27

Find the balance in each account after the given period.

7. $500 principal earning 4% compounded quarterly, after 10 yr $744.43

Find the balance in each account after the given period.

8. $6500 principal earning 2.8% compounded monthly, after 2 yr $6873.94

Identify the initial amount *a* and the decay factor *b* in each exponential function.

9. $y = 8 \cdot 0.8^x$

a = 8, b = 0.2

Identify the initial amount *a* and the decay factor *b* in each exponential function.

10. $f(x) = 12 \cdot 0.1^x$

a = 12, b = 0.9

State whether the equation represents *exponential growth, exponential decay,* or *neither.*

11. $y = 0.82 \cdot 3^x$

Exponential growth

State whether the equation represents *exponential growth, exponential decay,* or *neither.*

12. $f(x) = 5 \cdot 0.3^x$

Exponential decay

State whether the equation represents *exponential growth, exponential decay,* or *neither.*

13. $f(x) = 18 \cdot x^2$

Neither

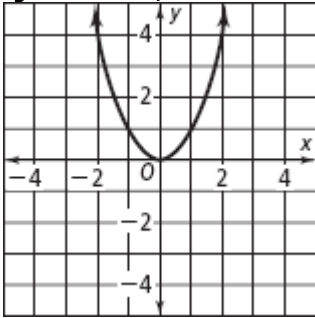**State whether the equation represents *exponential growth, exponential decay,* or *neither.***

14. $y = 0.9^x$

Exponential decay

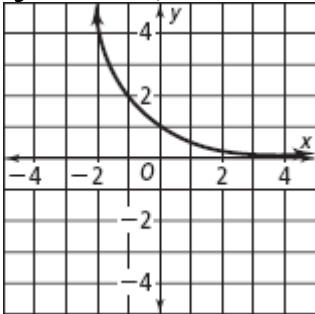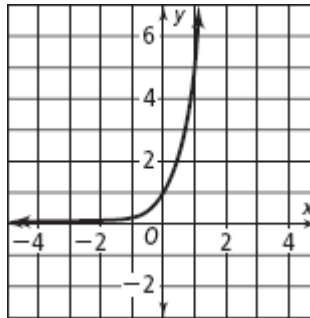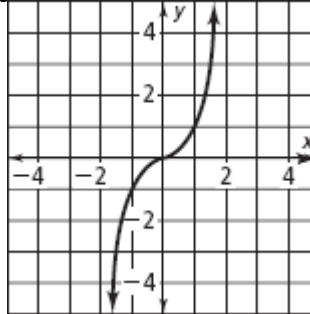**State whether each graph shows an *exponential growth function,* an *exponential decay function,* or *neither.***

20.

Neither

21.

Exponential growth

22.

Exponential decay

23.

Neither