

③ Identify Exponential Behaviors

|   |    |    |    |    |    |    |
|---|----|----|----|----|----|----|
| x | 0  | 5  | 10 | 15 | 20 | 25 |
| y | 64 | 32 | 16 | 8  | 4  | 2  |

$\xrightarrow{x \cdot 1/2}$   $\xrightarrow{x \cdot 1/2}$   $\xrightarrow{x \cdot 1/2}$   $\xrightarrow{x \cdot 1/2}$   $\xrightarrow{x \cdot 1/2}$

Method 1 look for a common factor  
this graph is like  $(1/2)^x$  family

Method 2 Graph and look for exponential characteristics.

7.5

Homework pg 427 1, 2, 7, 8, ~~9~~ <sup>Use</sup> 20, 25, 27-32, 47, 48

By hand

1. Graph  $2^x$

|   |  |
|---|--|
| x |  |
| y |  |

2. Graph  $-5^x$

|   |  |
|---|--|
| x |  |
| y |  |

7a) Domain days  $> 0$   
Range fruit flies  $\geq 100$

b) about 198 fruit flies

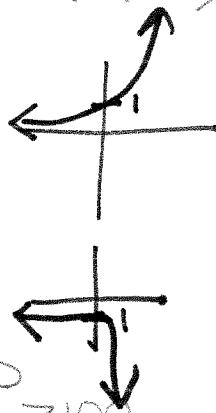
8. No, No common factor  
only common diff. of 2

9. Yes, common factor 4

20.a) about 312 bacteria

y-intercept (0, 300) 300 bacteria @ 9am

b) Domain: time  $\geq 0$   
Range: Bacteria  $\geq 300$



25. about 506% bigger

27. exponential

28. neither

29. linear

30. exponential

31. neither, 2 x's

32. linear

47. B - \$456.11

48. J - 112 in

containing

Tail