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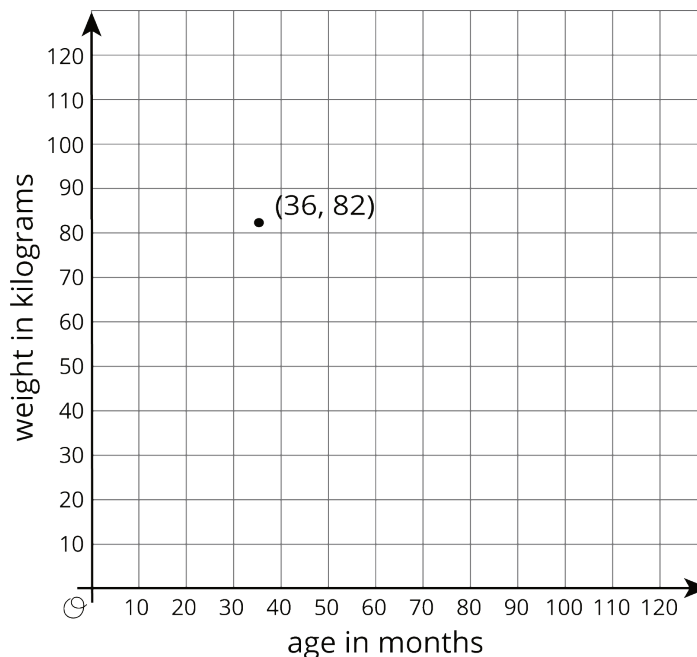
Unit 6: Pre-Unit Diagnostic Assessment

1. a. Write 10^3 without an exponent.

b. What number is this? $5 \cdot 10^2 + 3$

2. A giant panda lives in the Washington, DC zoo.

a. What does the point shown tell you about the panda?



b. Another panda weighs 90 kilograms and is 110 months old. Plot the point that corresponds to this panda in the coordinate plane shown.

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3. Decide what you would do to find the missing value in each equation. (You do not have to actually find the missing value.)

a. $? + 59\frac{5}{8} = 82\frac{2}{3}$

b. $87 \cdot ? = 9,526$

4. Without computing, select **all** of the expressions that have the same value as $81 \cdot (37 + 59)$.

A. $81 \cdot (59 + 37)$

B. $(81 \cdot 37) + 59$

C. $(81 \cdot 37) + (81 \cdot 59)$

D. $81 + (37 \cdot 59)$

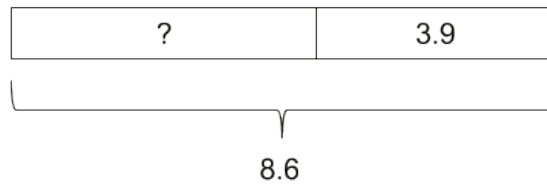
E. $(37 + 59) \cdot 81$

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5. Select **all** the equations represented by this tape diagram.



A. $3.9 + ? = 8.6$

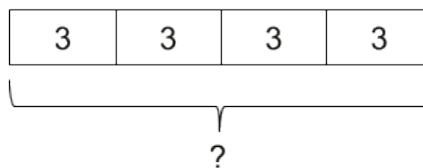
B. $8.6 + 3.9 = ?$

C. $8.6 = ? + 3.9$

D. $8.6 - 3.9 = ?$

E. $? - 3.9 = 8.6$

6. Select **all** the equations represented by this tape diagram.



A. $4 + 3 = ?$

B. $3 + 3 + 3 + 3 = ?$

C. $? = 4 \cdot 3$

D. $? = 3 \cdot 3 \cdot 3 \cdot 3$

E. $4 \div 3 = ?$

F. $4 = ? \div 3$