

# KITTEN NEONATAL GROWTH CURVES

A PRACTICAL TOOL FOR BREEDERS



*These Kitten Neonatal Growth Curves are not intended to be a diagnostic tool or to predict the growth of any particular pet. Instead, this is a monitoring tool intended to assess the growth pattern of a given pet in comparison to the reference at the same age category.*

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The neonatal growth charts presented in this booklet are the result of several years of research collaboration work with high-level teams, expert in neonatology (NeoCare, ENVT, Toulouse, France) and data science (Seenovate, Lyon, France).

The huge work of data collection on the field has been driven by the NeoCare team and can be summarized in a few numbers:

- More than **250,000 body weights measurements**
- over the period **between birth and 62 days of age**
- from more than **6,600 kittens**
- representing **36 breeds**
- born in **220 French breeding facilities**
- representing **a unique retrospective longitudinal follow-up**

Then, the data were organized and processed by statisticians to draw the variability of the evolution of body weight from birth up to 2 months of age. Only data coming from kittens alive and assumed in good health during this period were used.

According to the number and repartition of data available for each breed, the growth charts have been built by using breed data only or by grouping data from breeds with similar growth features when relevant.

This booklet presents the most appropriate growth template for any kitten's breed at the publication date of this document. In the future, the collection of more body weights measurements could allow us to improve these growth charts and make them more and more accurate.

For few breeds, growth charts are available for male or female kittens. When there is only one growth chart, it is suitable for both male and female kittens.

Furthermore, when there is no indication on hair length, the growth chart is suitable for both long and short hair kittens (for instance: American Curl, Kurilean Bobtail, Munchkin, Selkirk Rex...).

### 📌 If you're looking for more details, please read the science behind these growth charts:

Kocevar G, Rioland M, Laxalde J, Mugnier A, Adib-Lesaux A, Gaillard V, Bodin J. Growth charts for small sample sizes using unsupervised clustering: Application to canine early growth. *Vet Res Commun.*2023. Jun;47(2):693-706.doi: 10.1007/s11259-022-10029-2.

This booklet presents the most accurate neonatal growth charts, available at the date of publication of this booklet, from birth up to 2 months of age for more than 30 kitten breeds.

A growth chart allows you to track how a kitten's weight evolves from birth until 2 months old. For practicality reasons, the growth chart **is displayed into 2 graphs, firstly from birth up to 20 days of age, then from 21 to 62 days of age.**

On a graph, you can see **5 reference lines** which correspond to the **9, 25, 50, 75 and 91 centiles** from bottom to top respectively. The bottom reference line is the 9th centile curve. It indicates that 9% of kittens (of a given population) have a weight below this curve. The upper reference line is the 91th centile curve. It indicates that 91% of kittens (of a given population) have a weight below this curve.

One kitten's weight can be anywhere on the graph, and even sometimes outside the weight curves represented. Nevertheless, it should smoothly increase across time. To have the best visualization of your kitten's weight evolution we advise you to monitor it on a regular basis. Weight loss or the absence of weight gain for 2 consecutive days should alert you and encourage you to seek advice from your veterinarian.

### Here are few tips using the neonatal growth charts:

**1. Select the corresponding growth charts for your kitten breed, phenotype and sex when available.**

**If the breed is not available, please use the generic kitten growth chart (page 46).**

**2. Print one page** for each kitten of the litter and fill in the identity information.

**3. Weigh the kitten and plot the body weight** on the growth charts:

**4. It is important to use a scale** that is accurate to at least 5 g. We recommend that you weigh the kittens at regular intervals at the same time each day.

**5. We advise to weigh the kitten at birth then each day** at least up to day 20 (graph on top). Then, continue to weigh the kitten every other day as much as possible up to the end of the follow-up period (graph on the bottom).



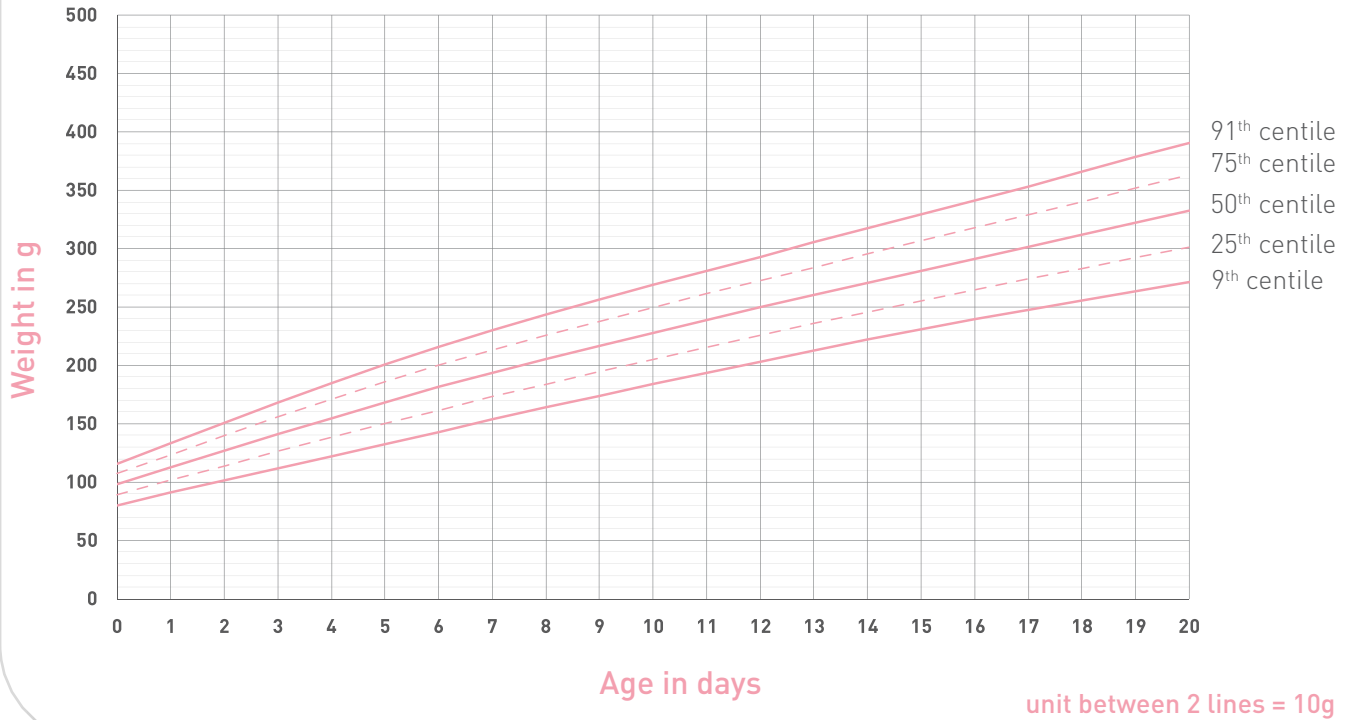
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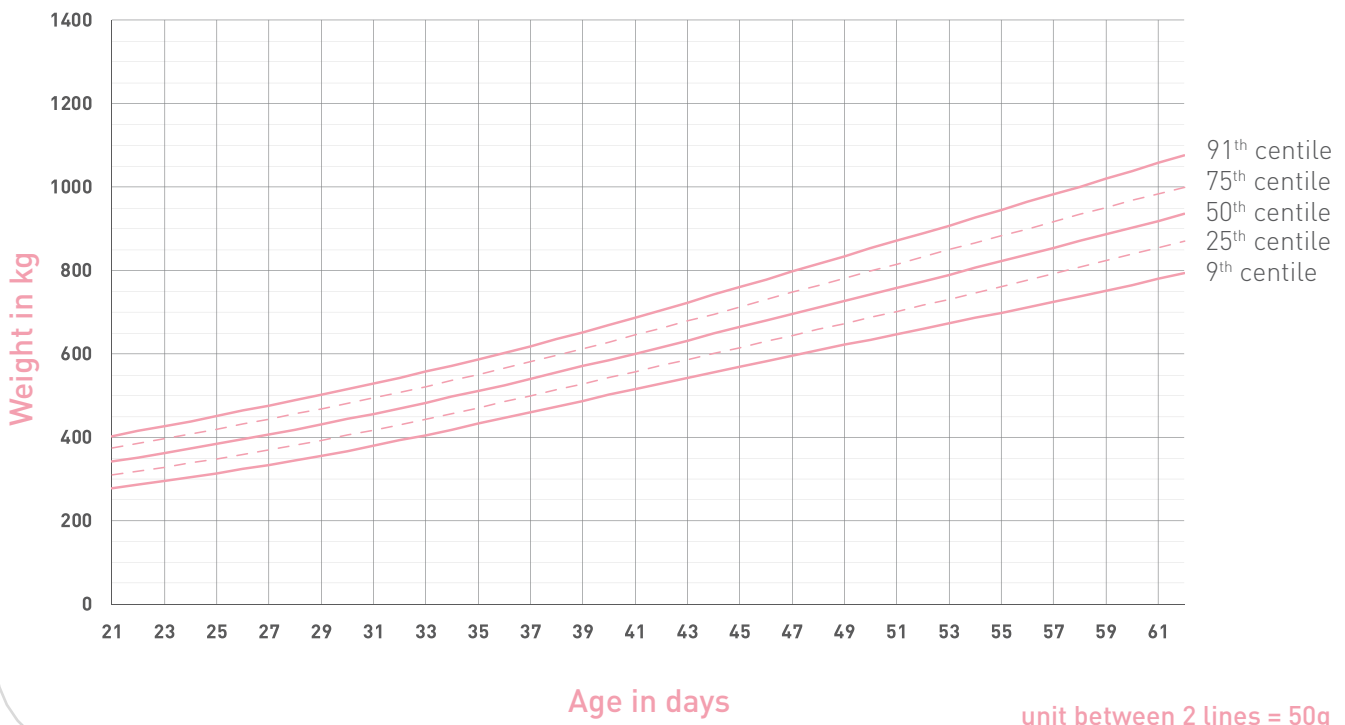
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





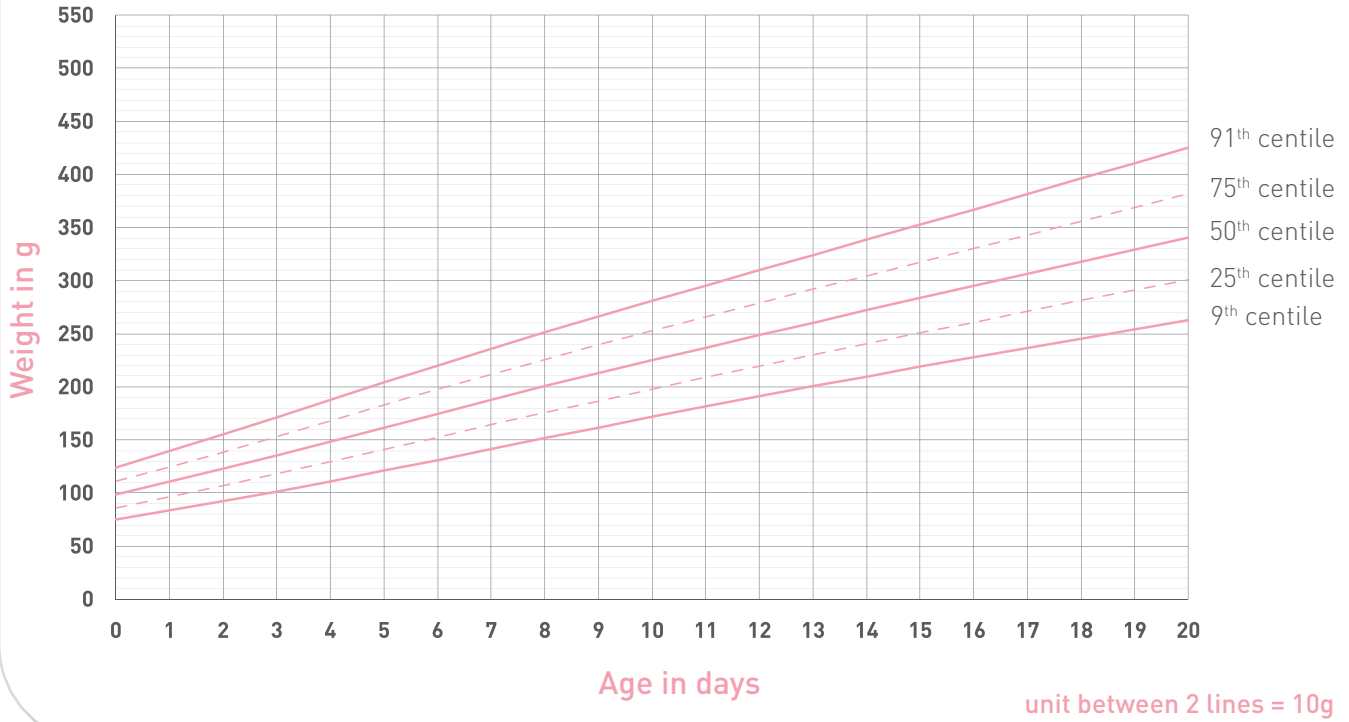
# KITTEN EARLY GROWTH CHART AMERICAN CURL



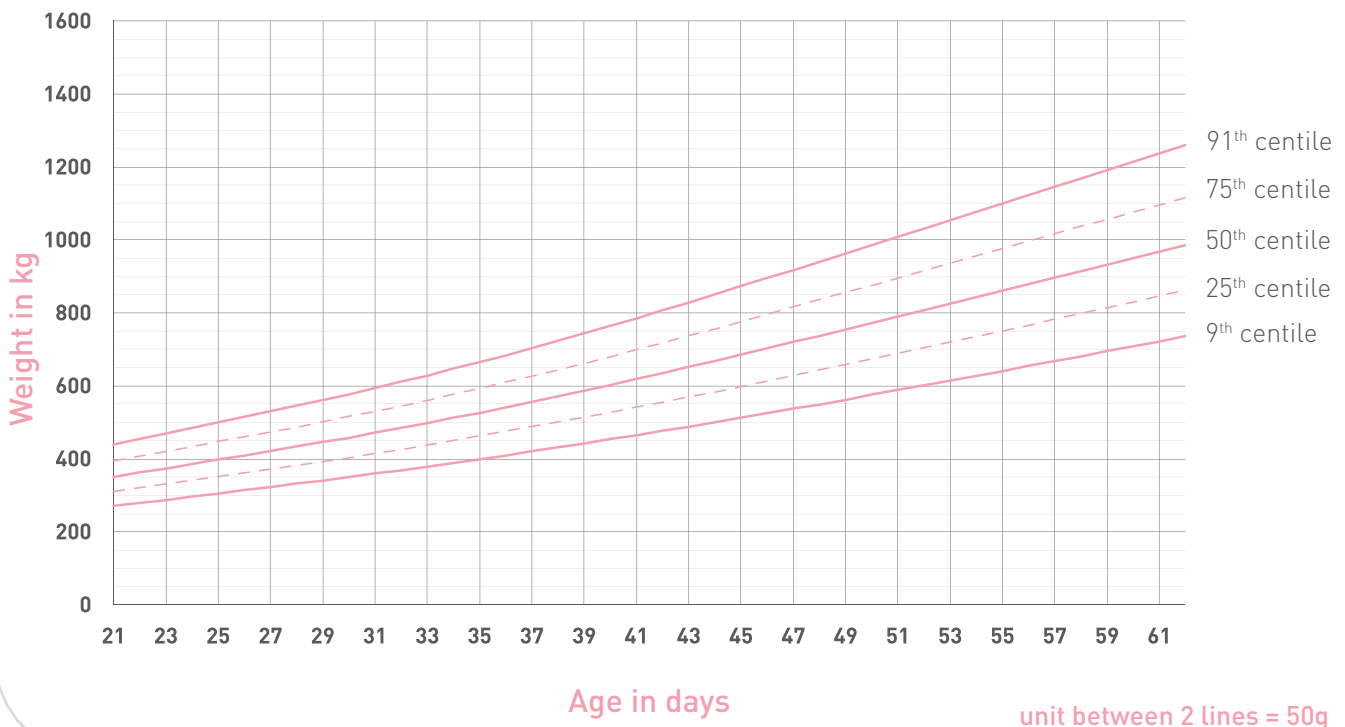
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





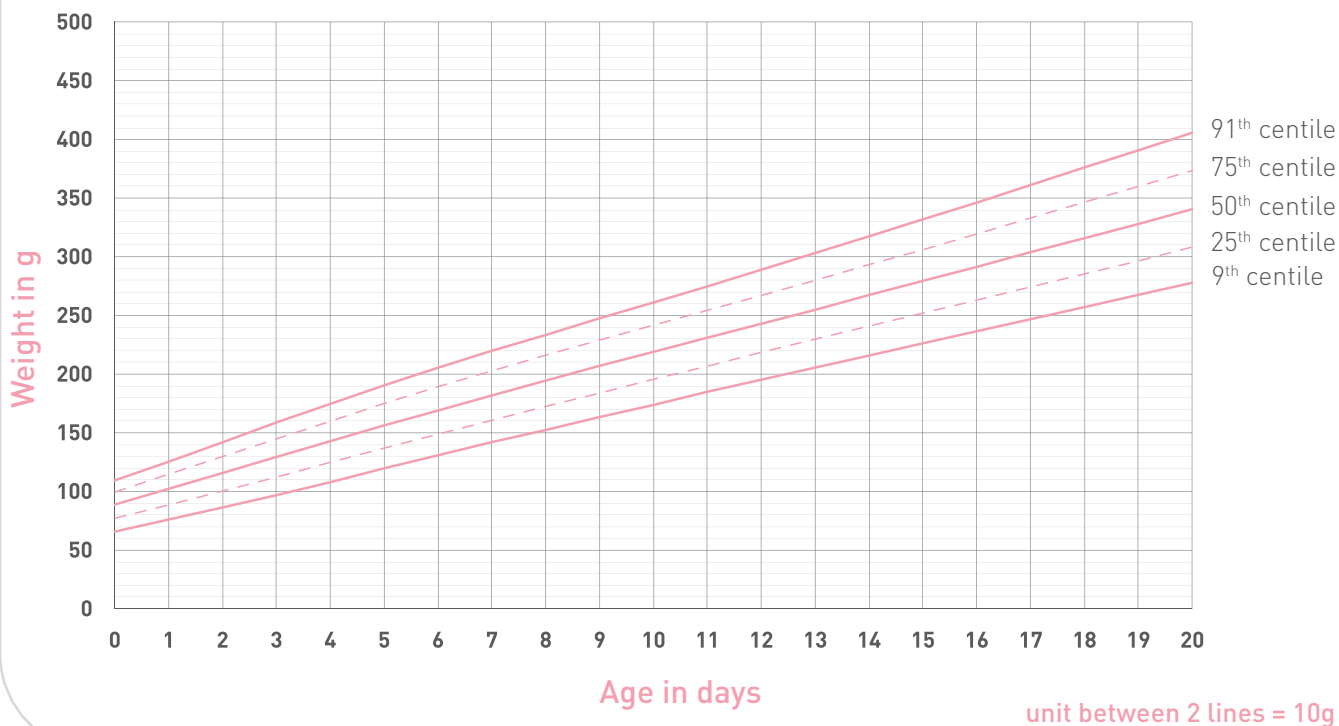
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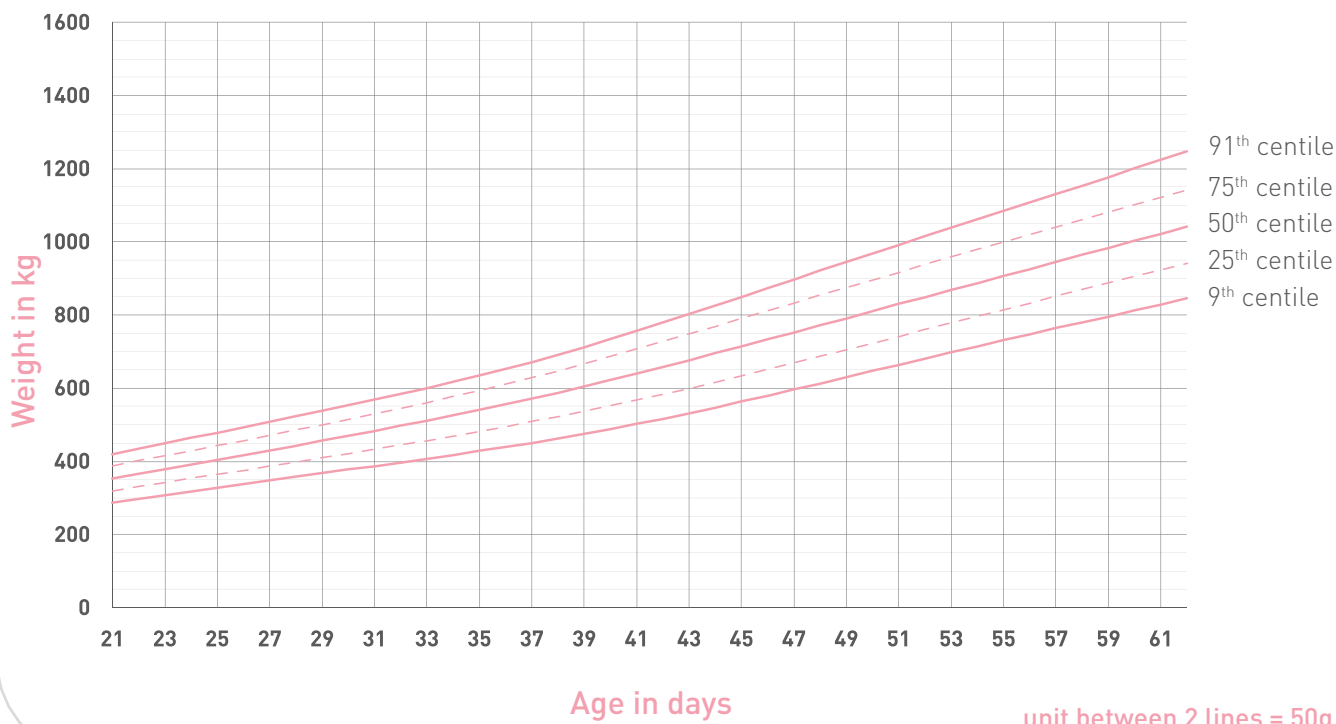
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days







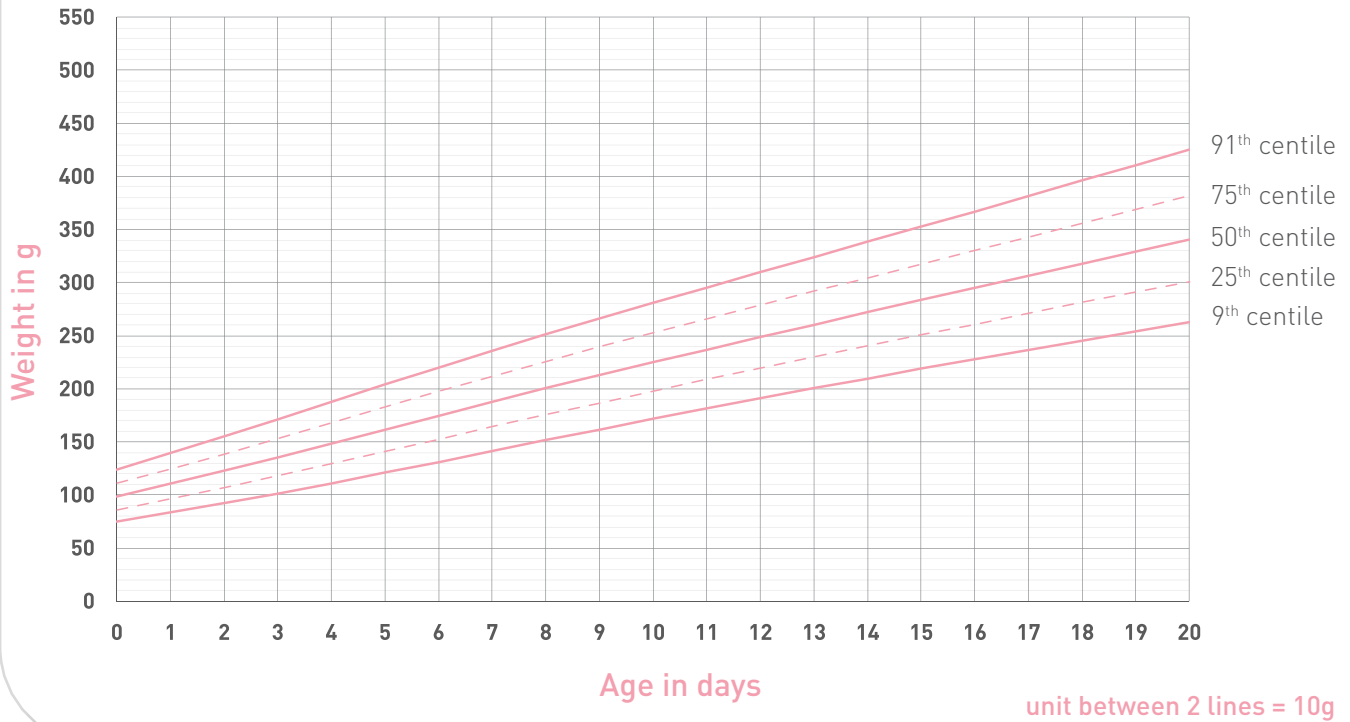
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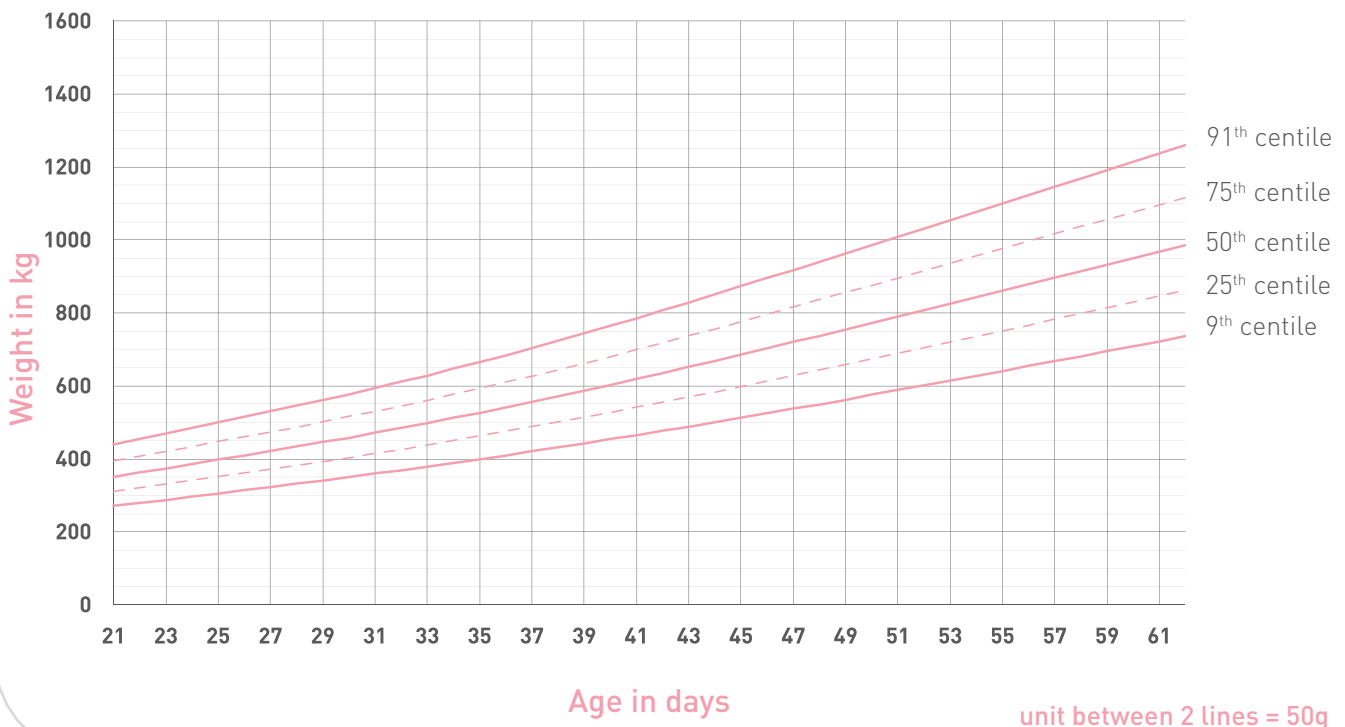
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





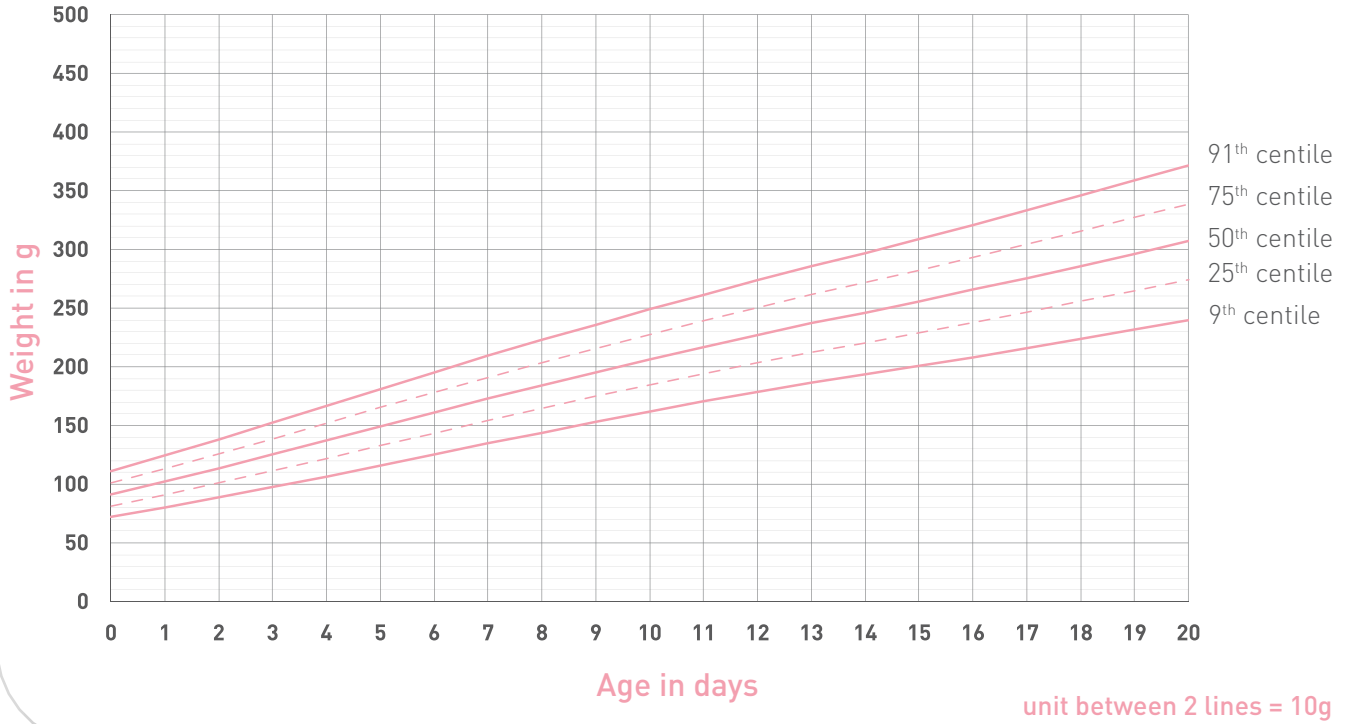
# KITTEN EARLY GROWTH CHART BRITISH LONGHAIR



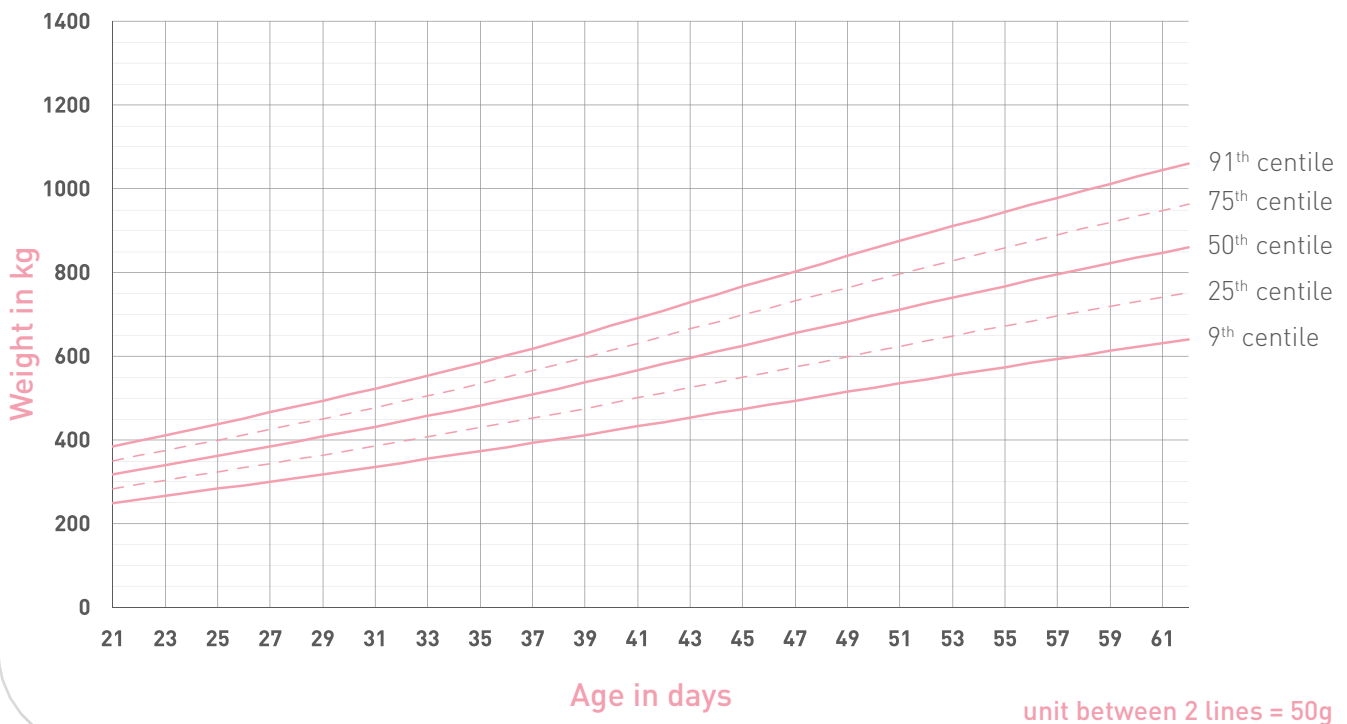
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





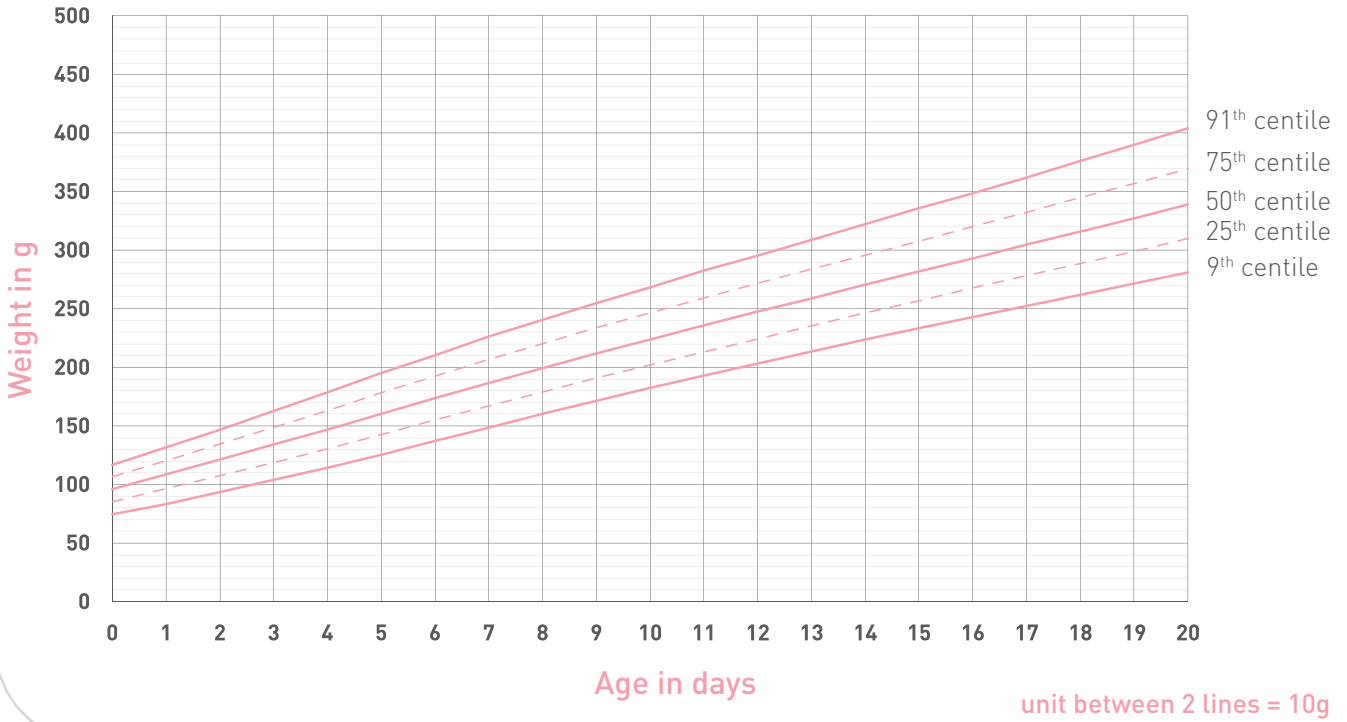
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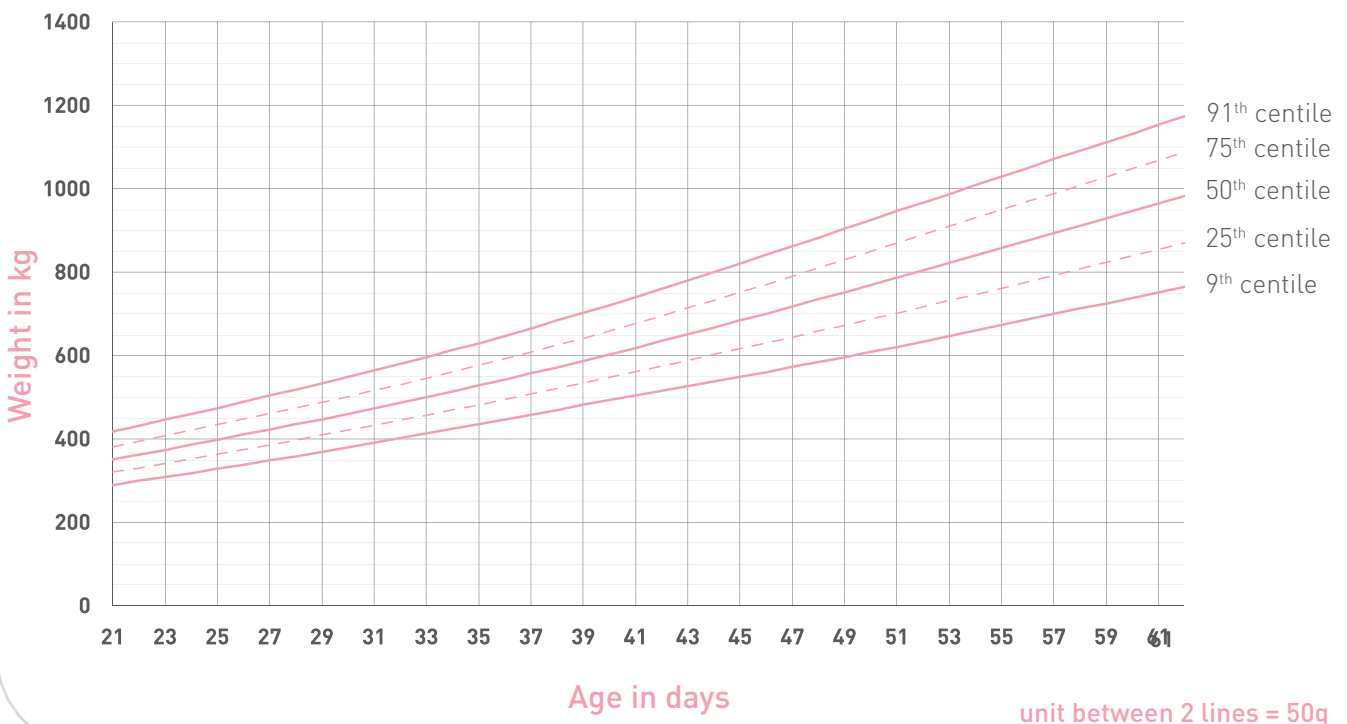
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





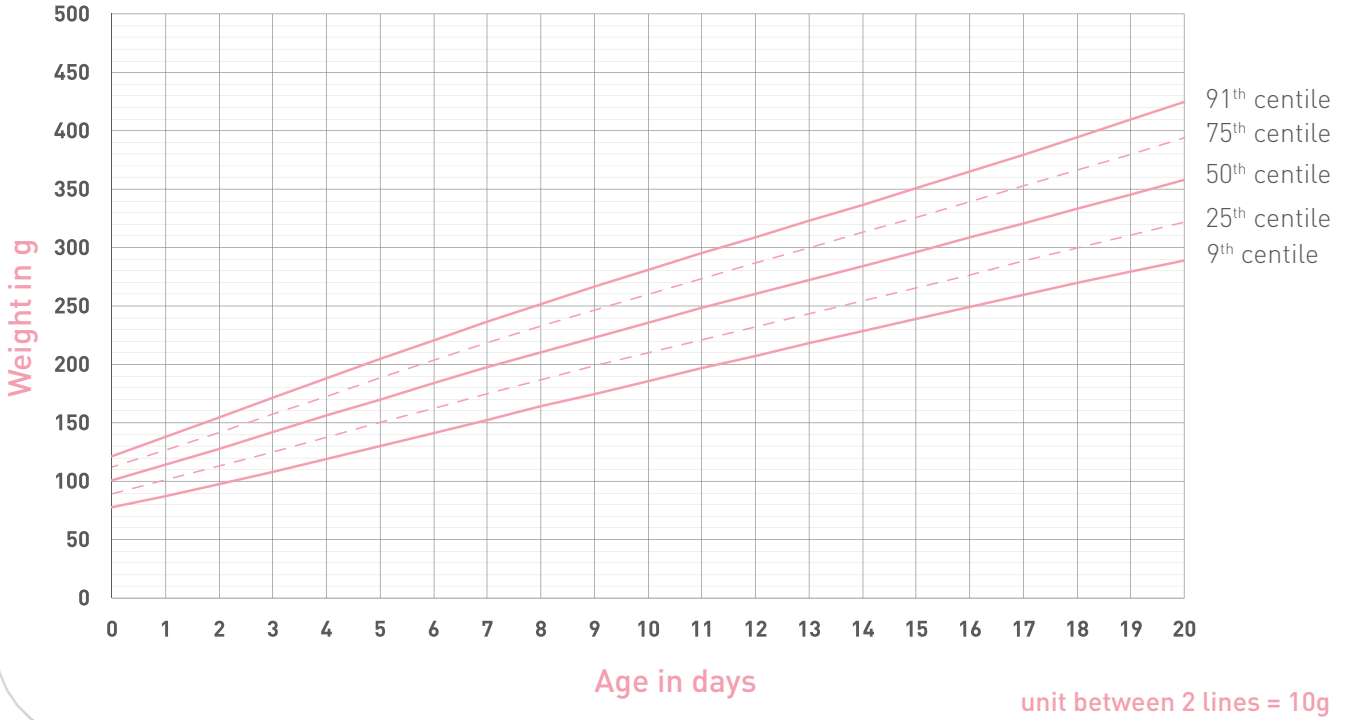
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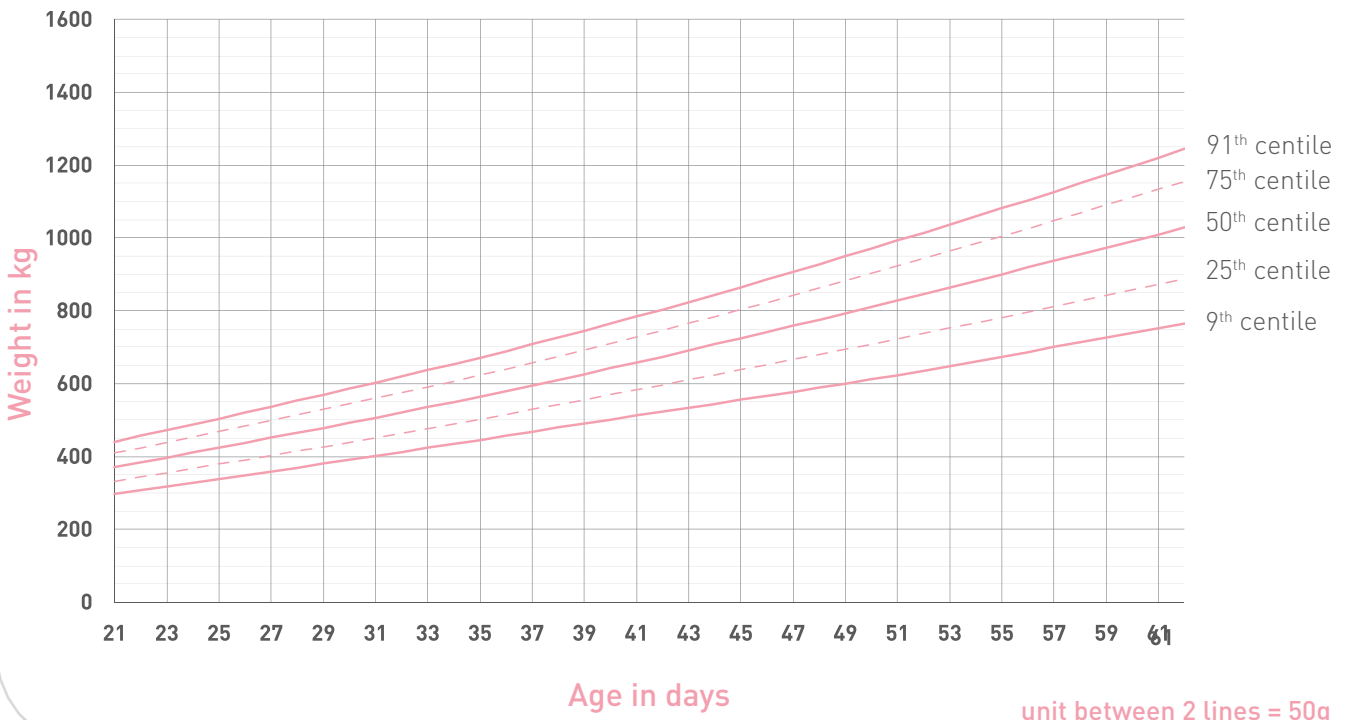
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





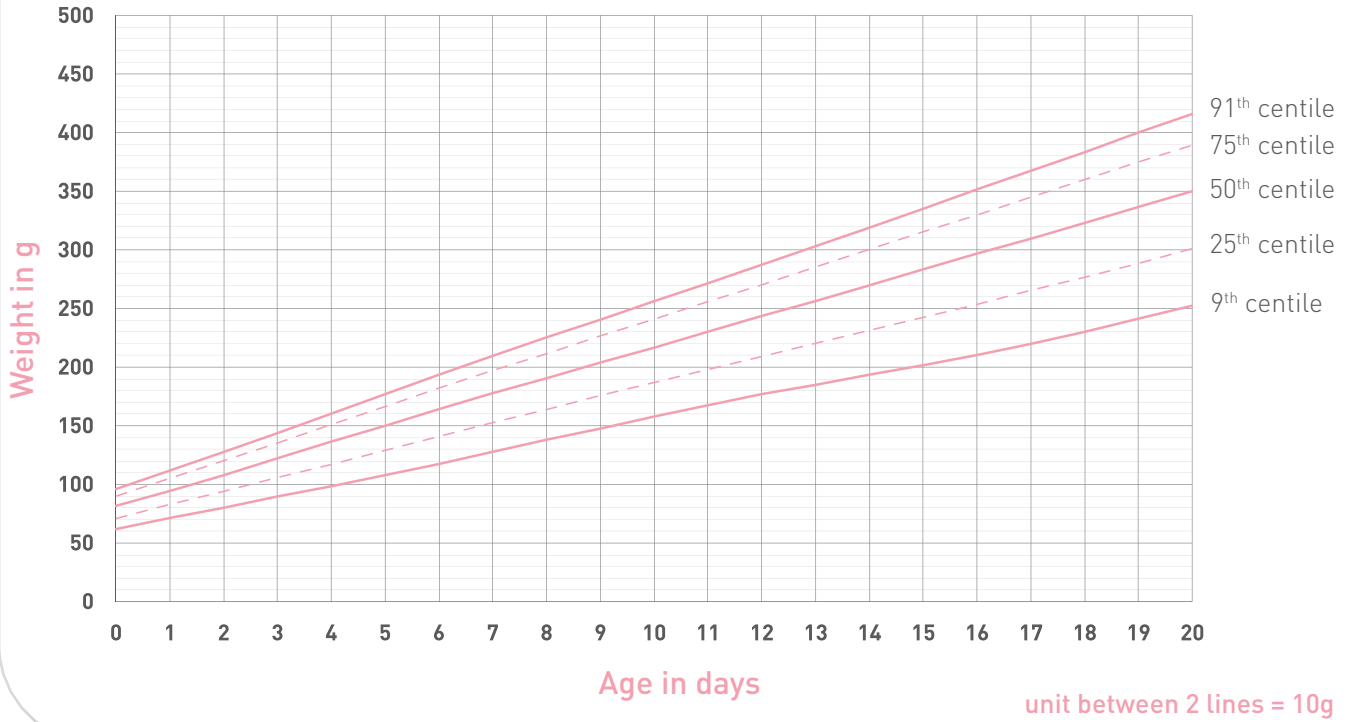
# KITTEN EARLY GROWTH CHART BURMESE



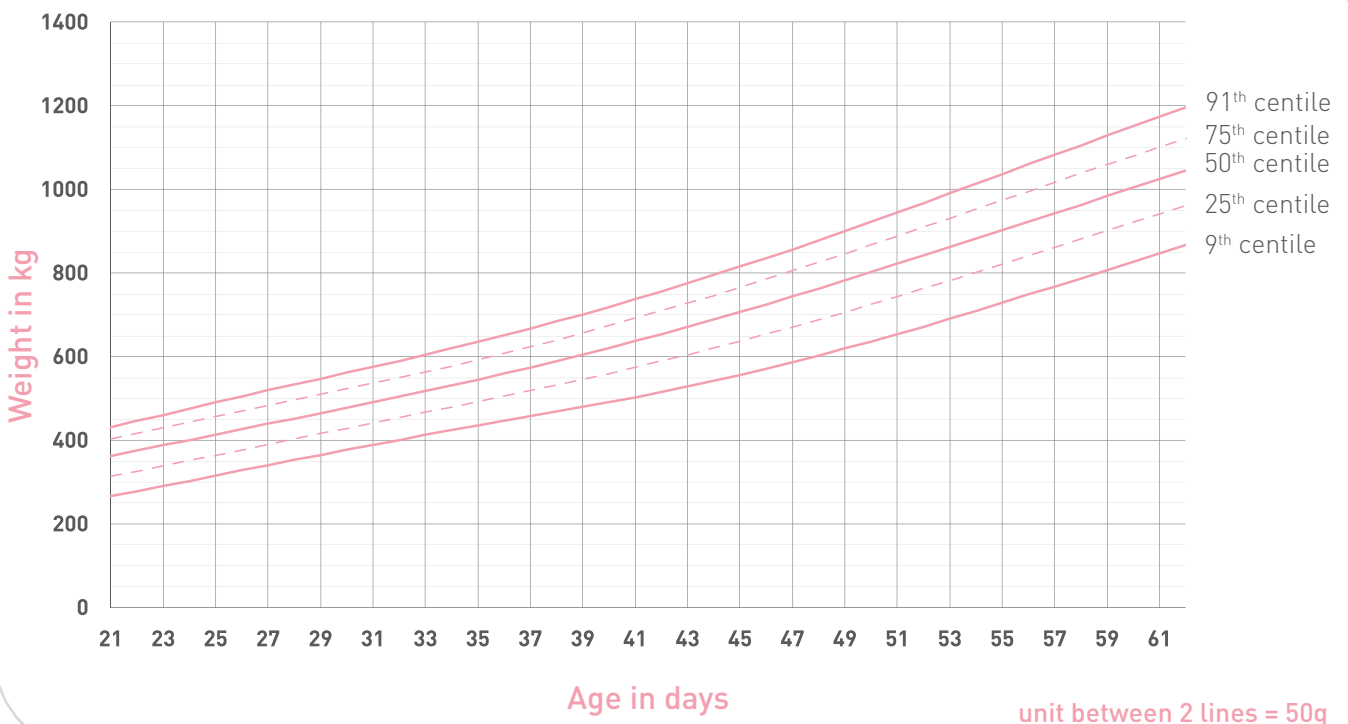
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





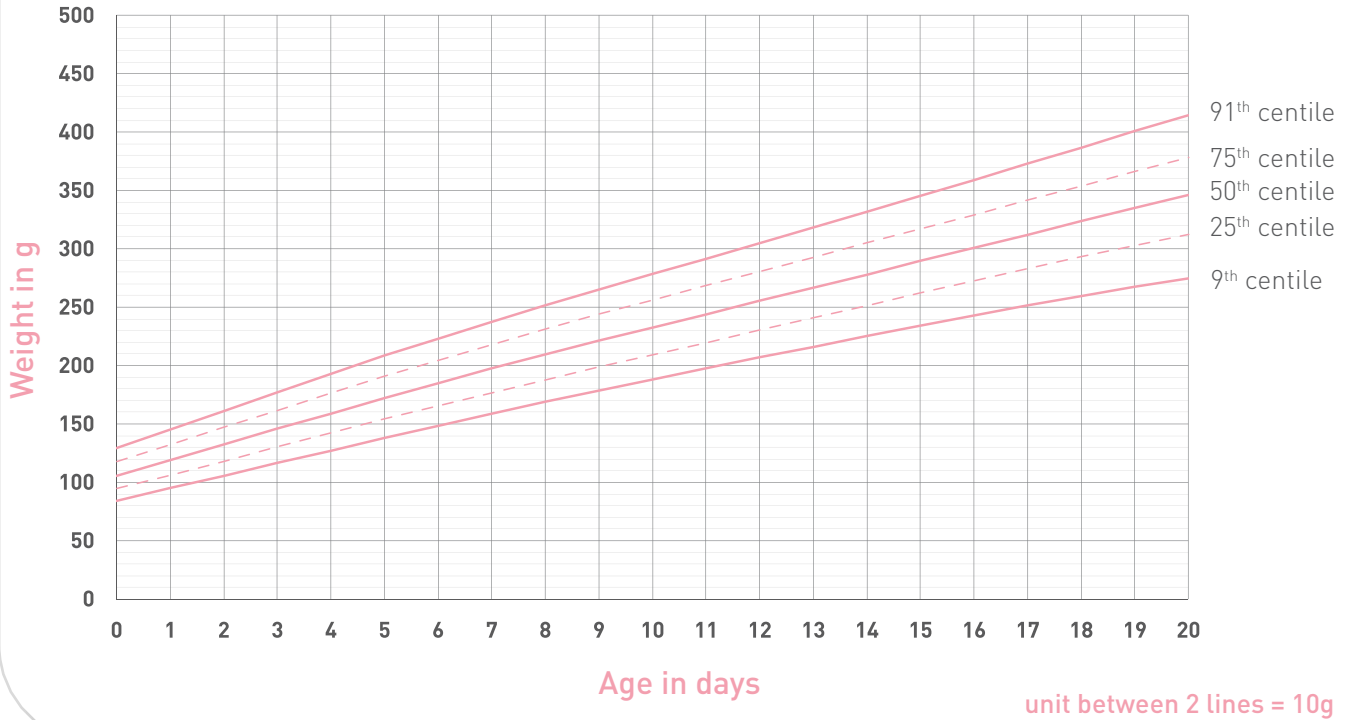
# KITTEN EARLY GROWTH CHART CHARTREUX FEMALE



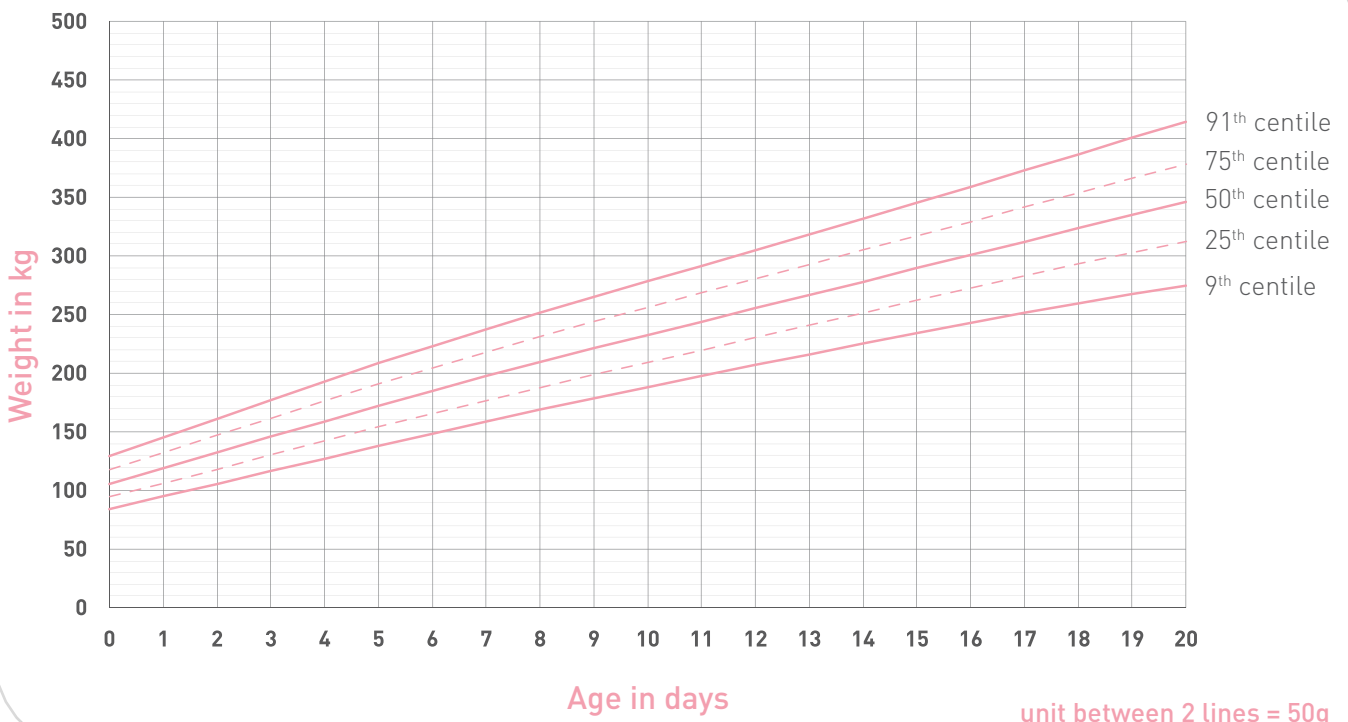
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





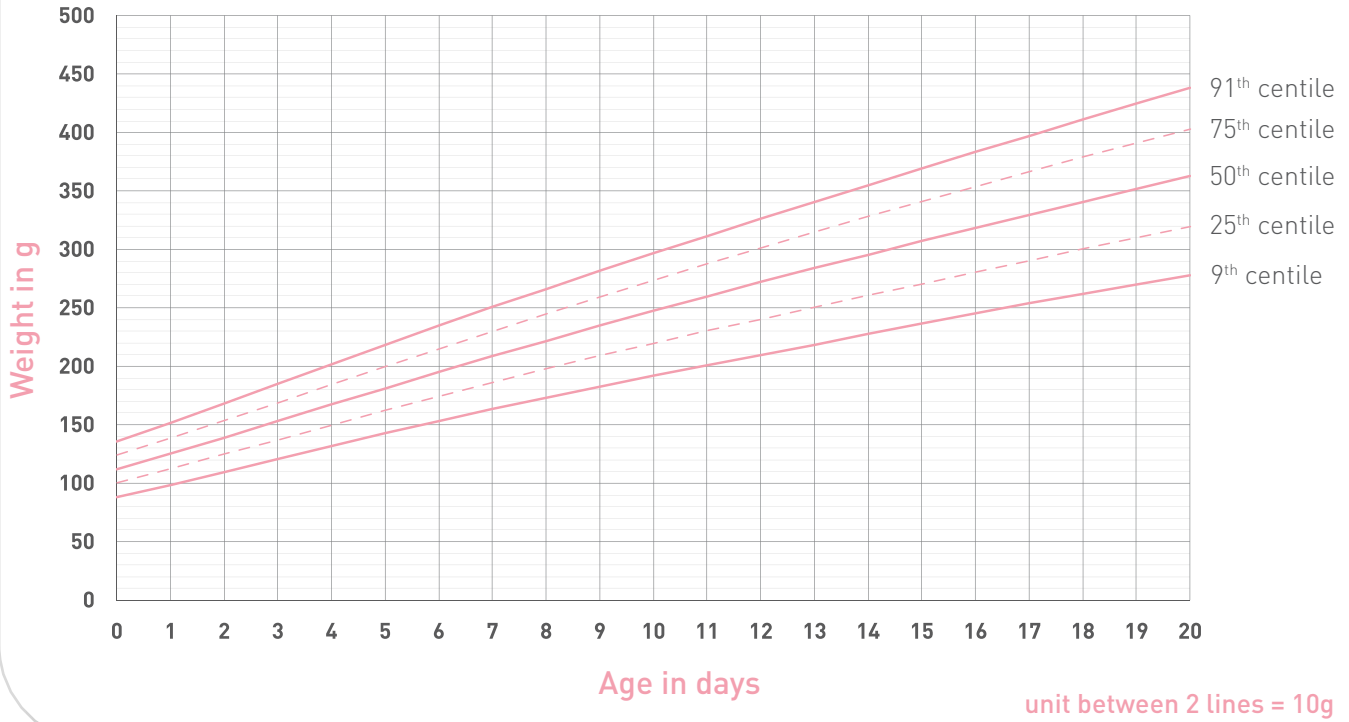
# KITTEN EARLY GROWTH CHART CHARTREUX MALE



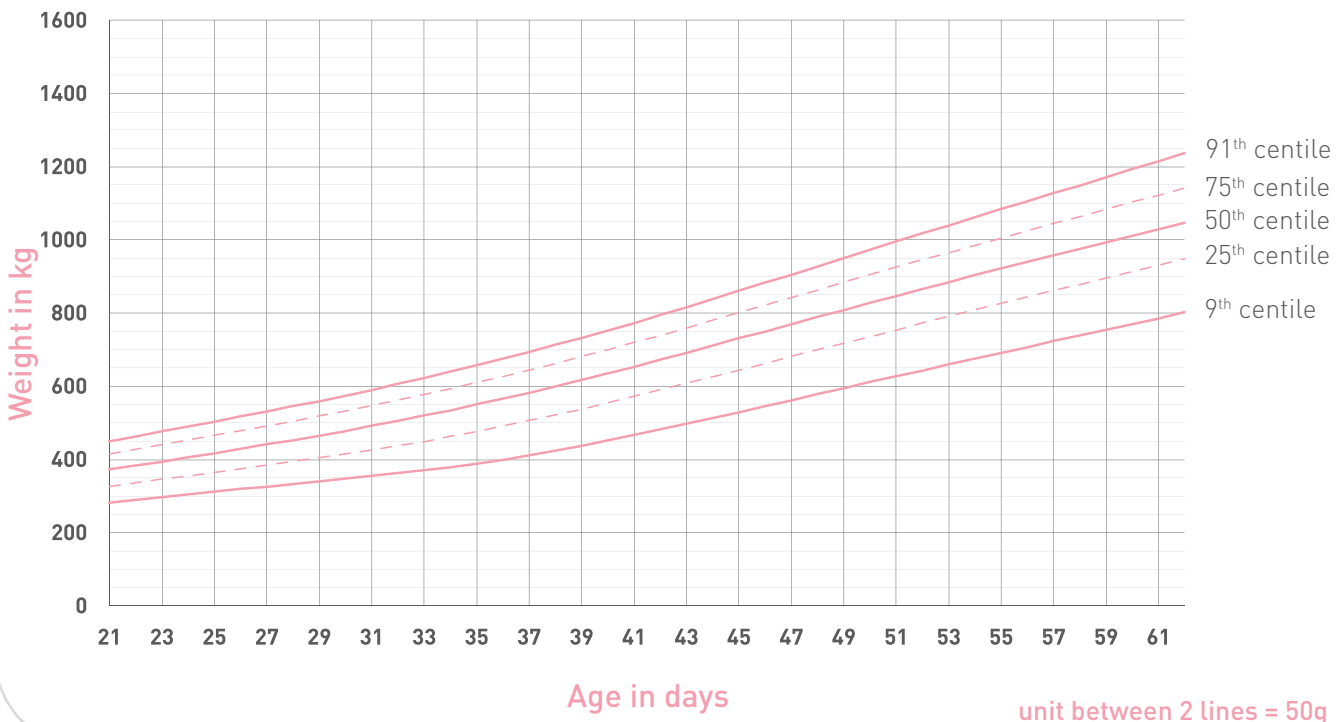
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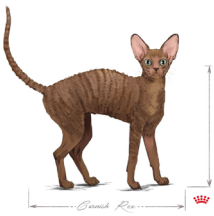
Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





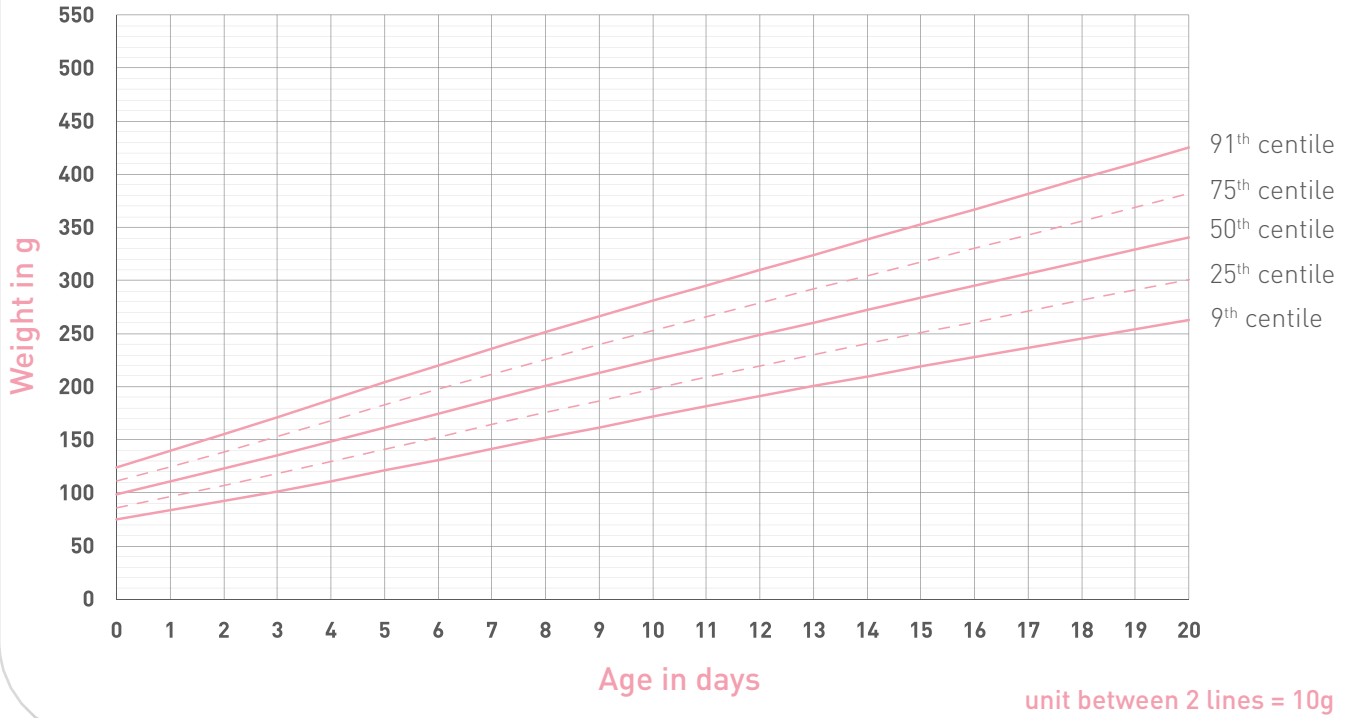
# KITTEN EARLY GROWTH CHART CORNISH REX



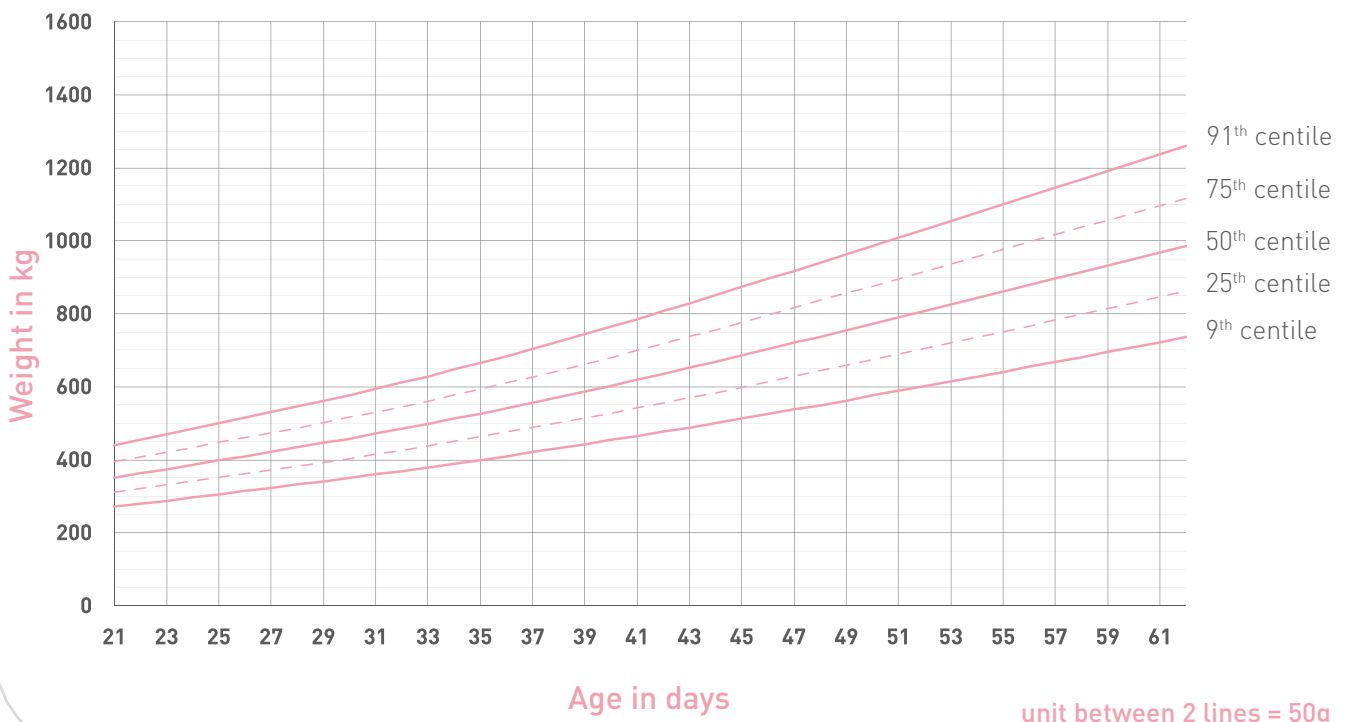
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days







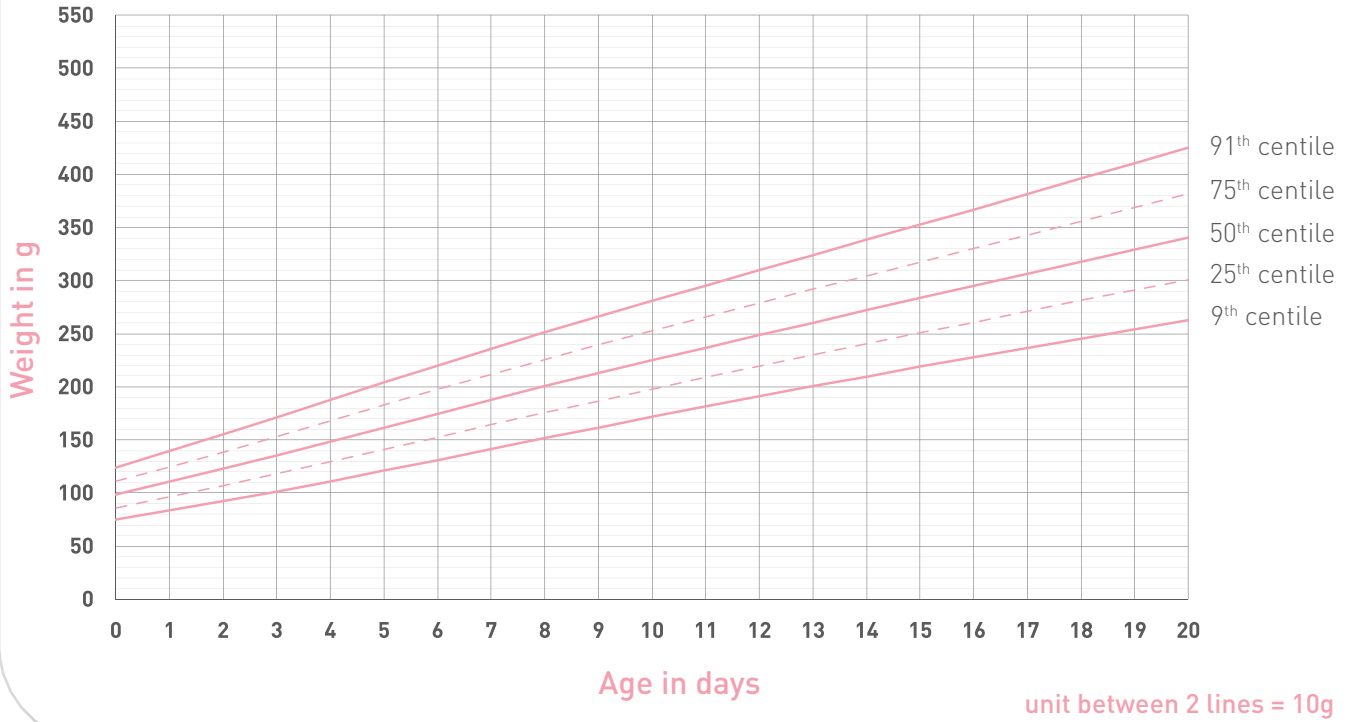
# KITTEN EARLY GROWTH CHART DEVON REX



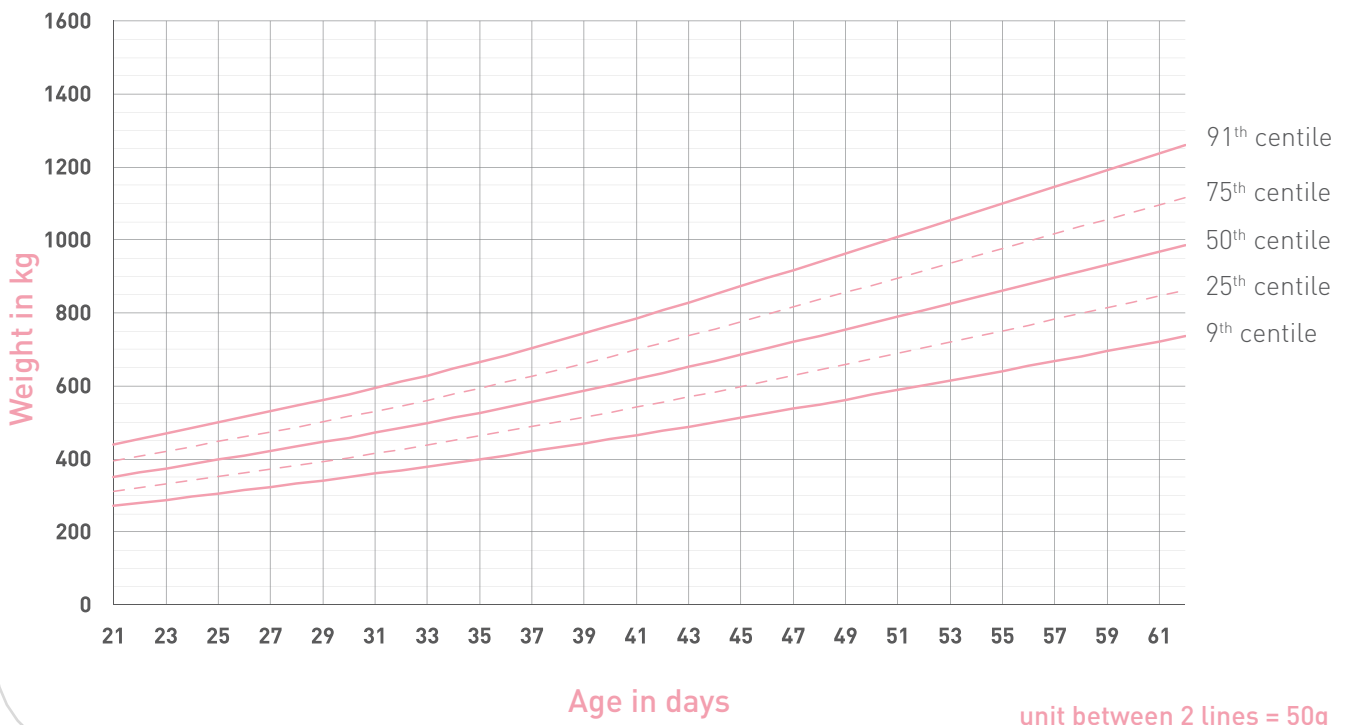
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





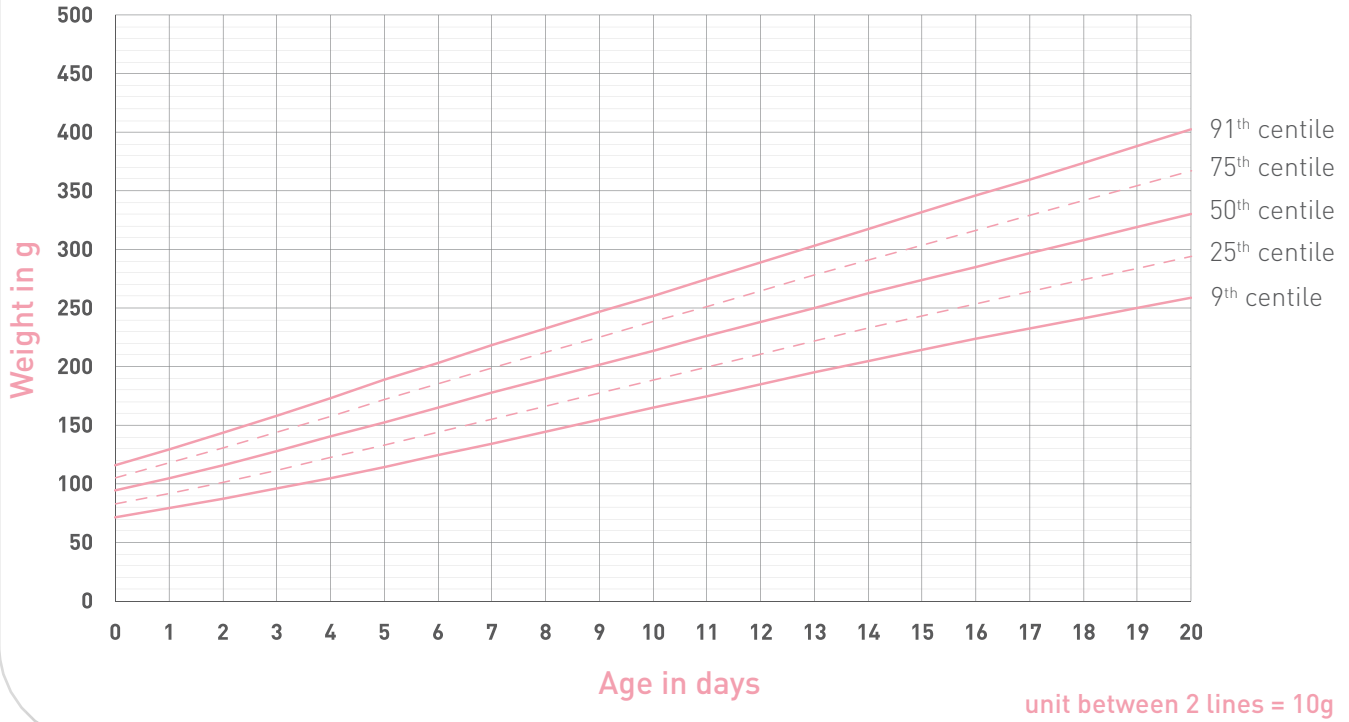
# KITTEN EARLY GROWTH CHART EGYPTIAN MAU



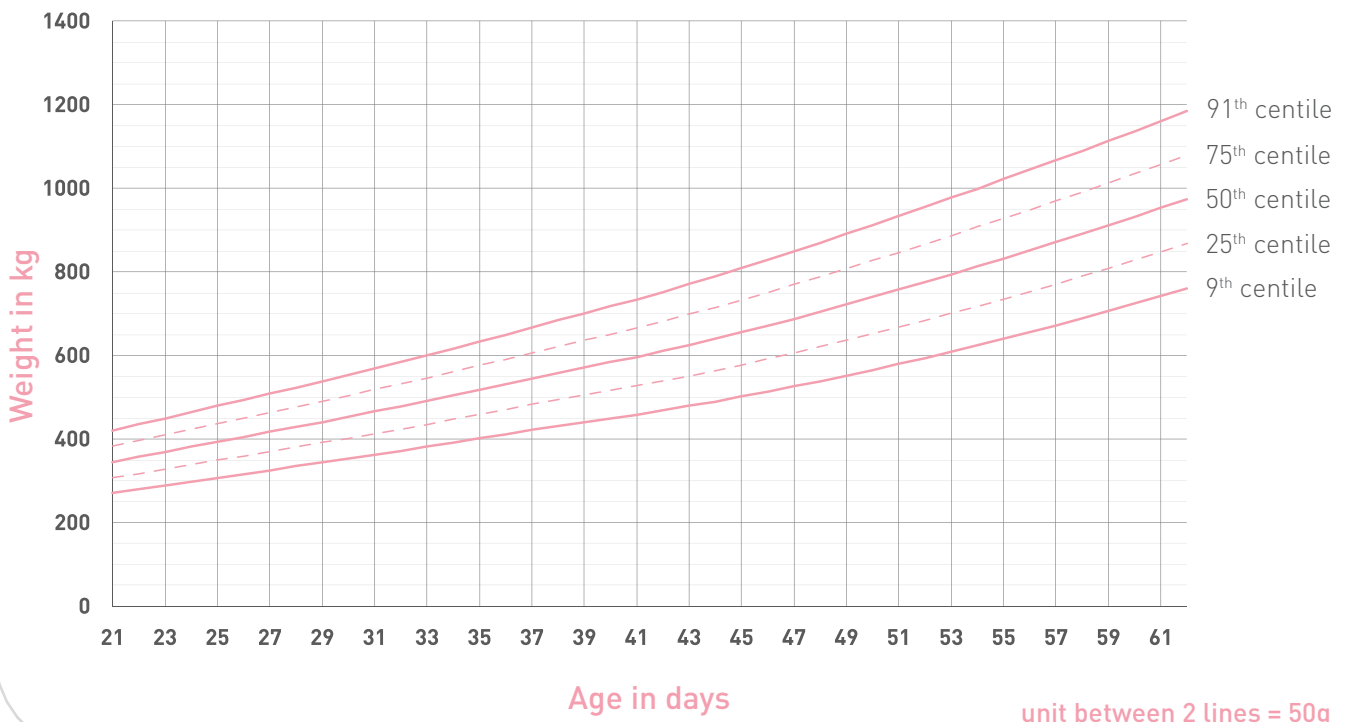
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





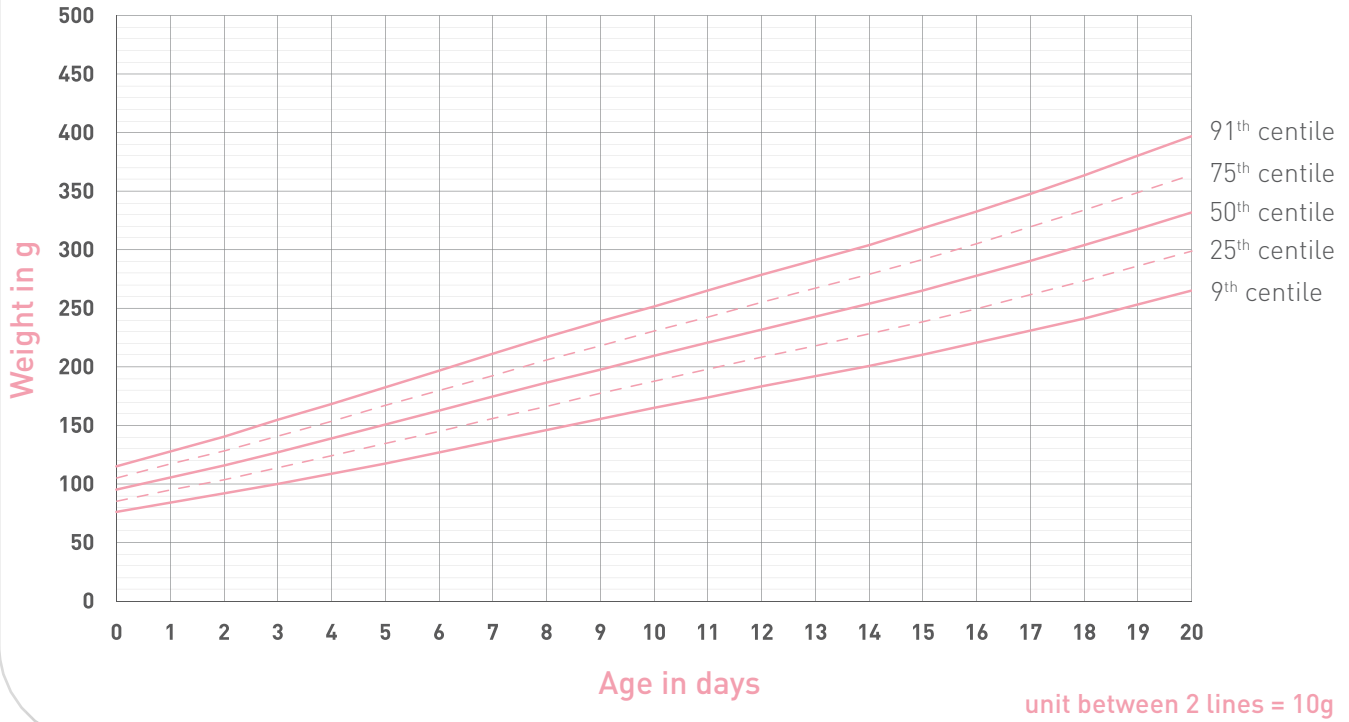
# KITTEN EARLY GROWTH CHART EXOTIC SHORHAIR



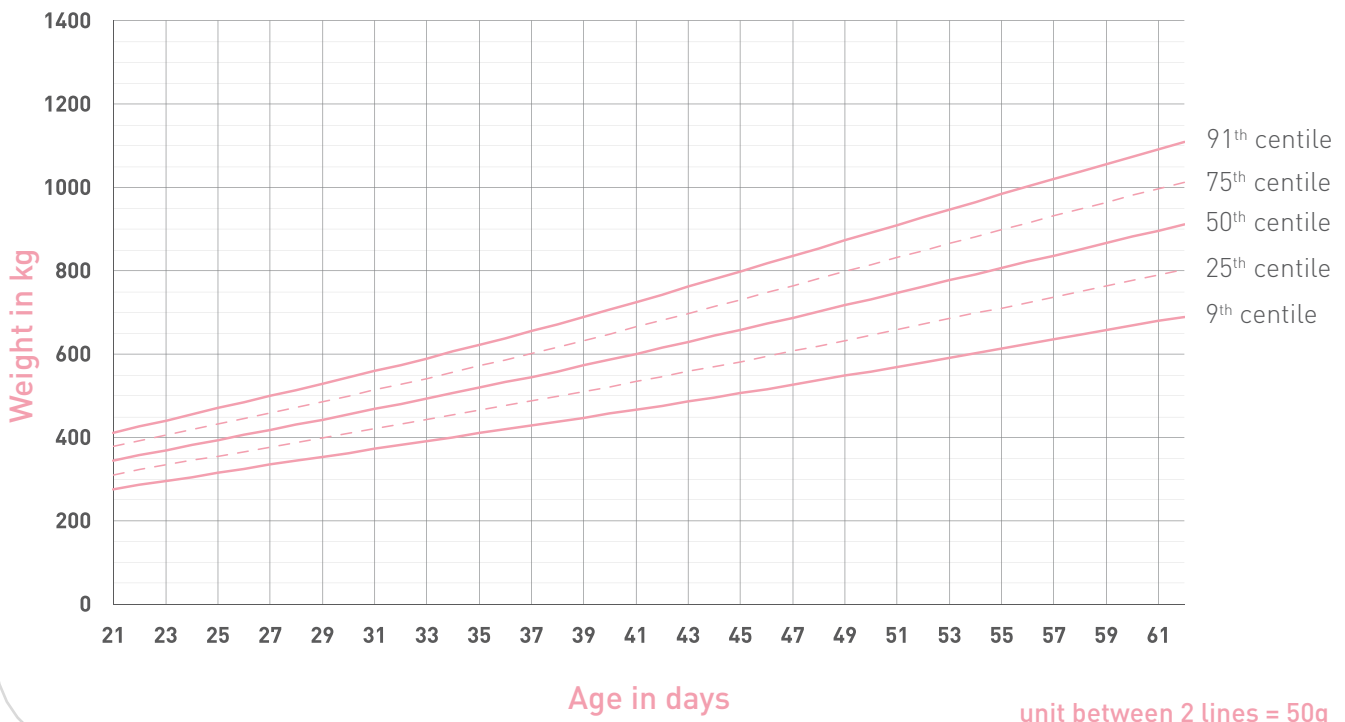
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





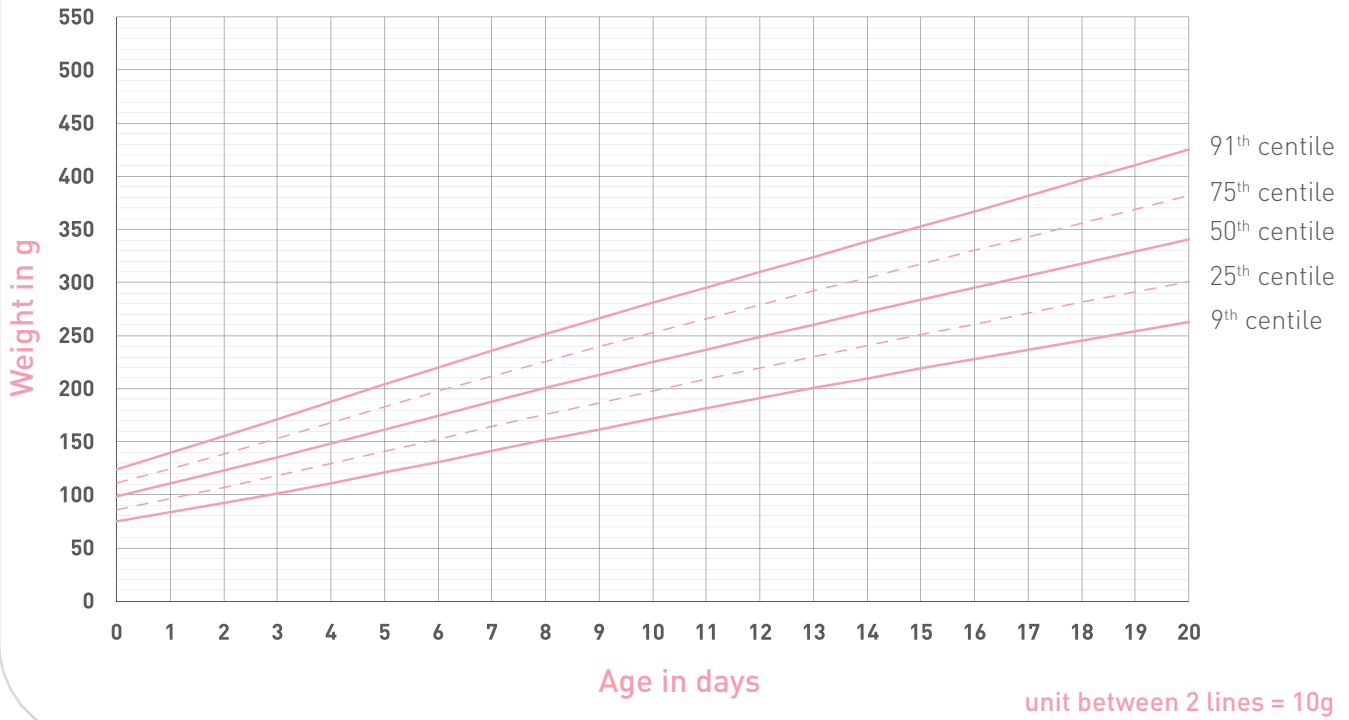
# KITTEN EARLY GROWTH CHART JAPANESE BOBTAIL



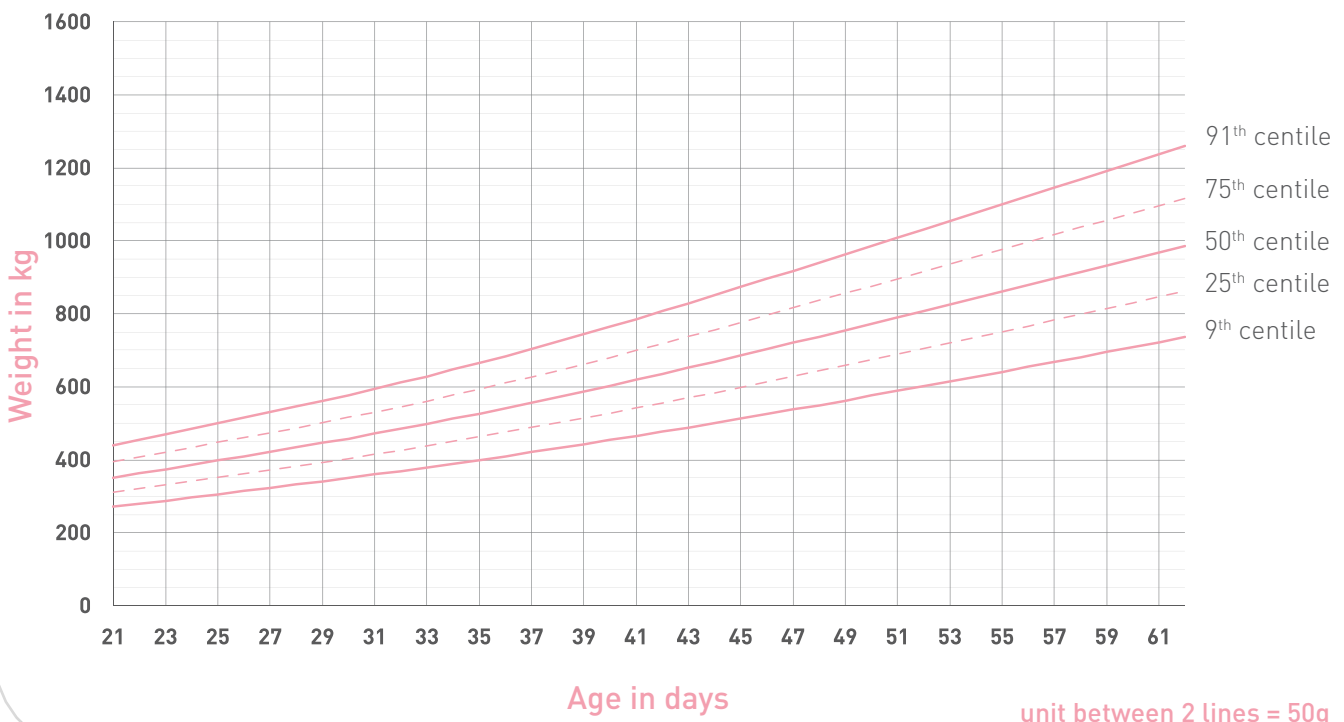
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





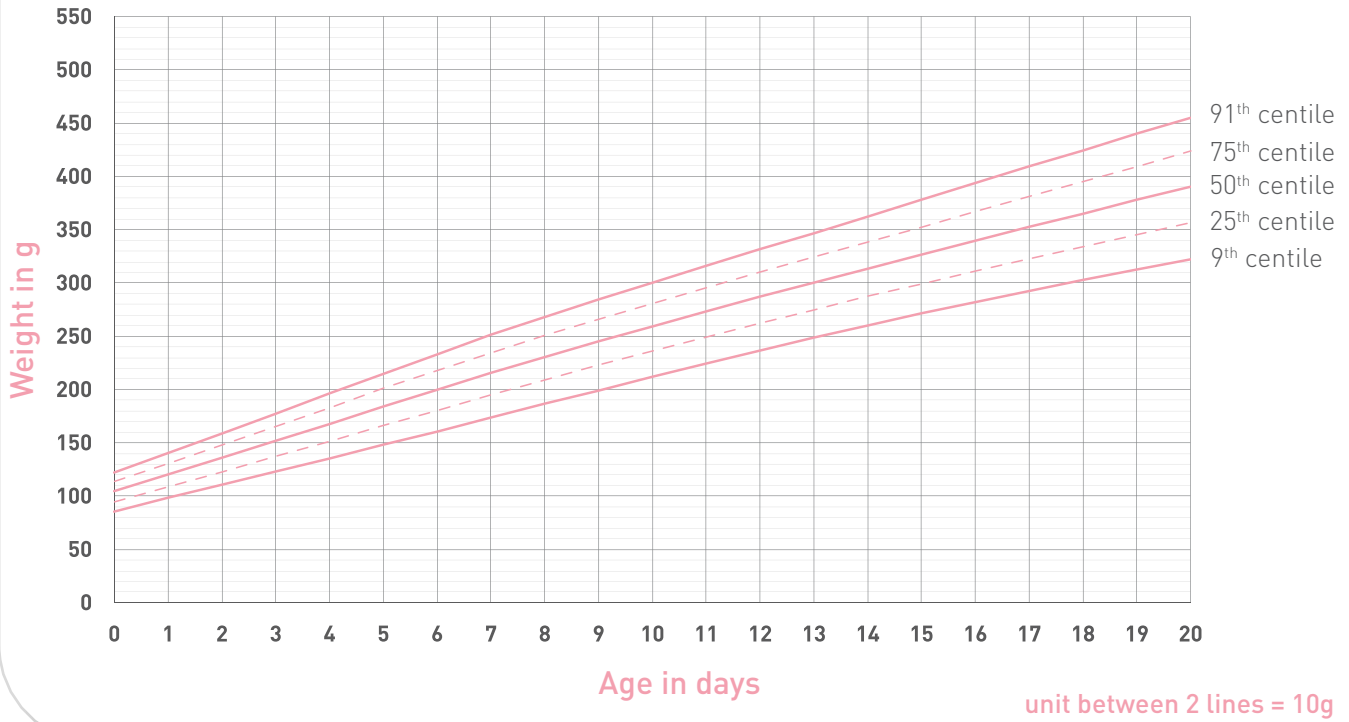
# KITTEN EARLY GROWTH CHART KURILIAN BOBTAIL



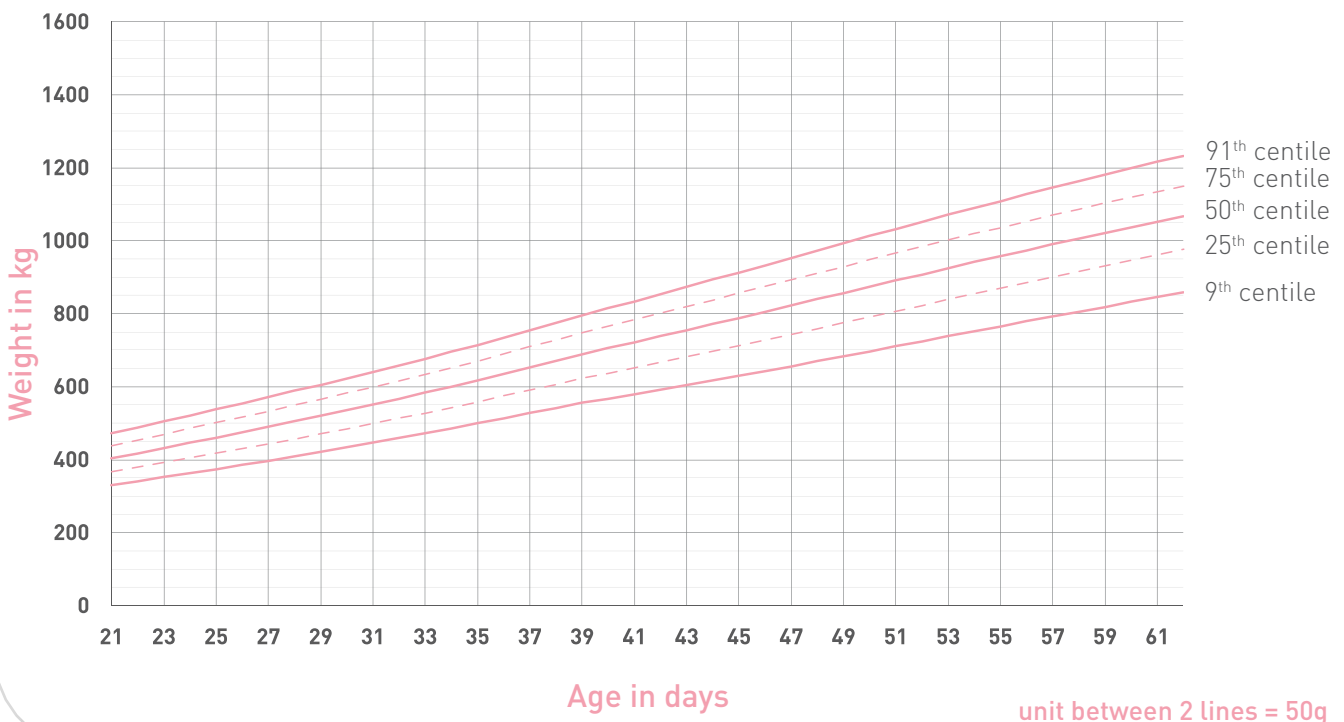
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





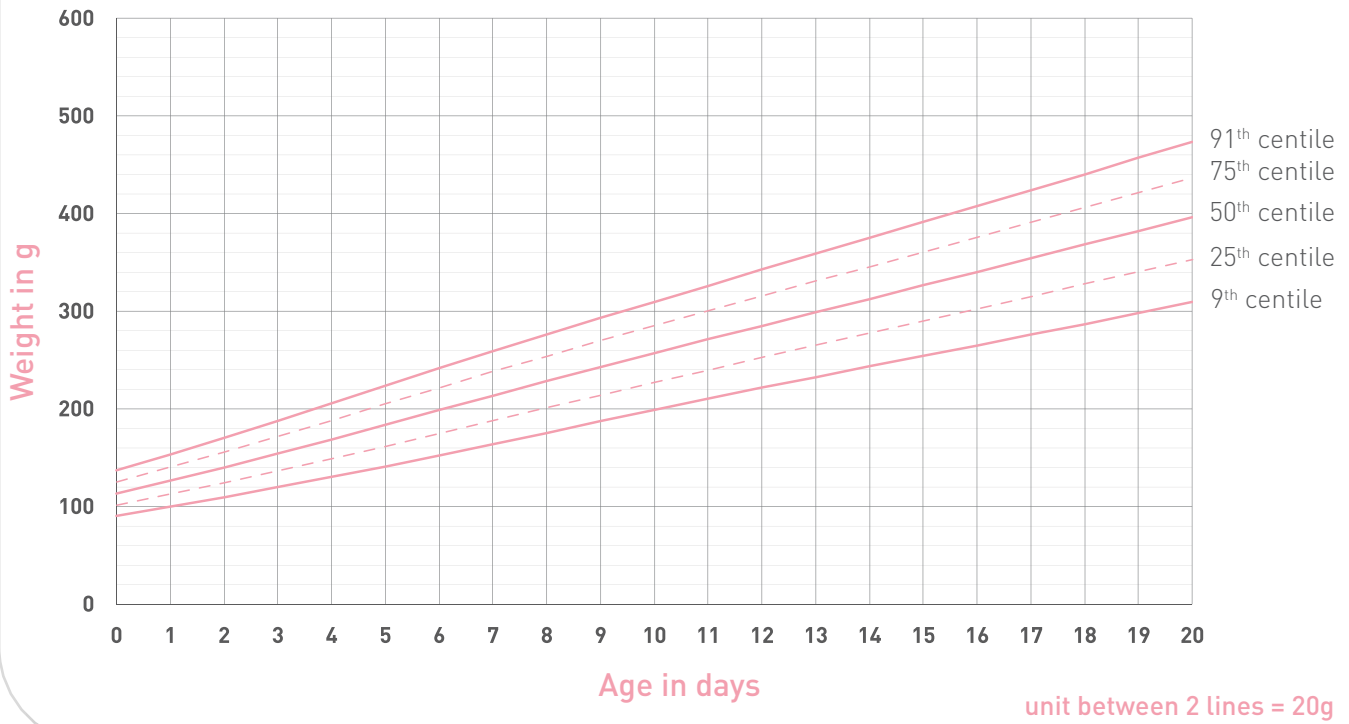
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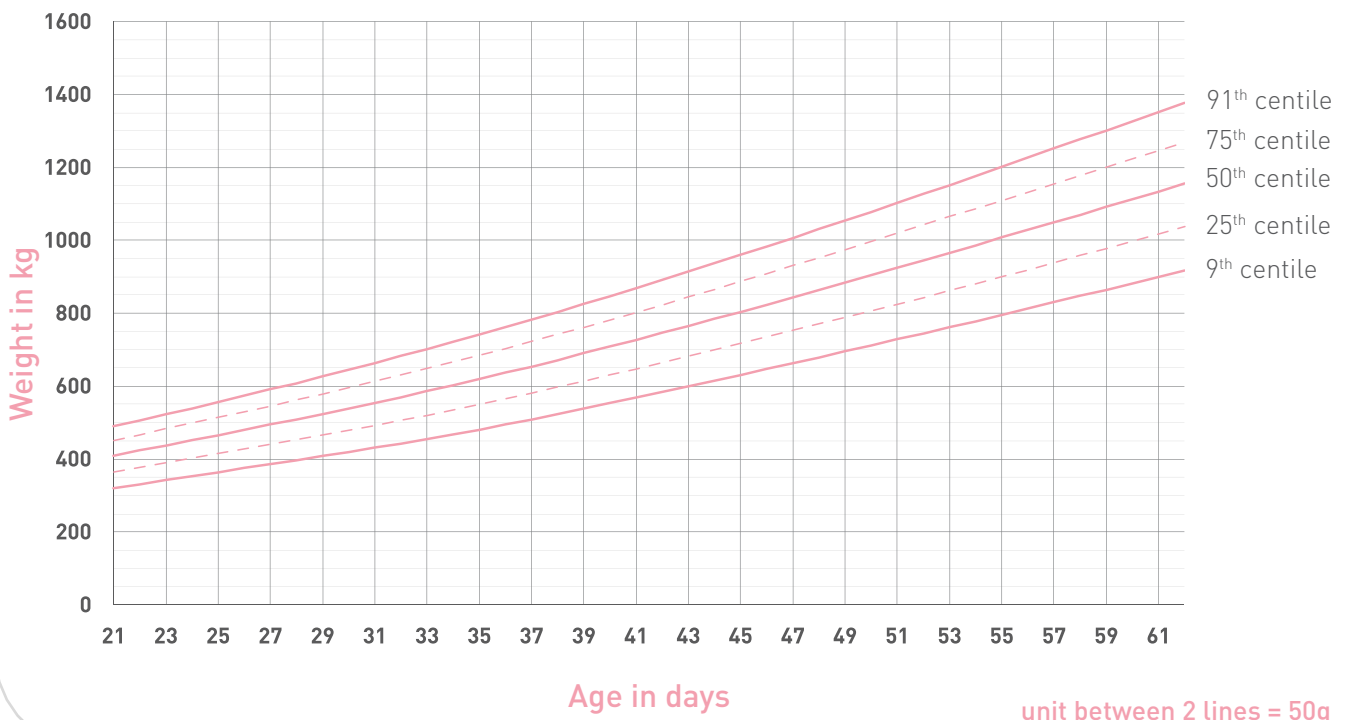
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





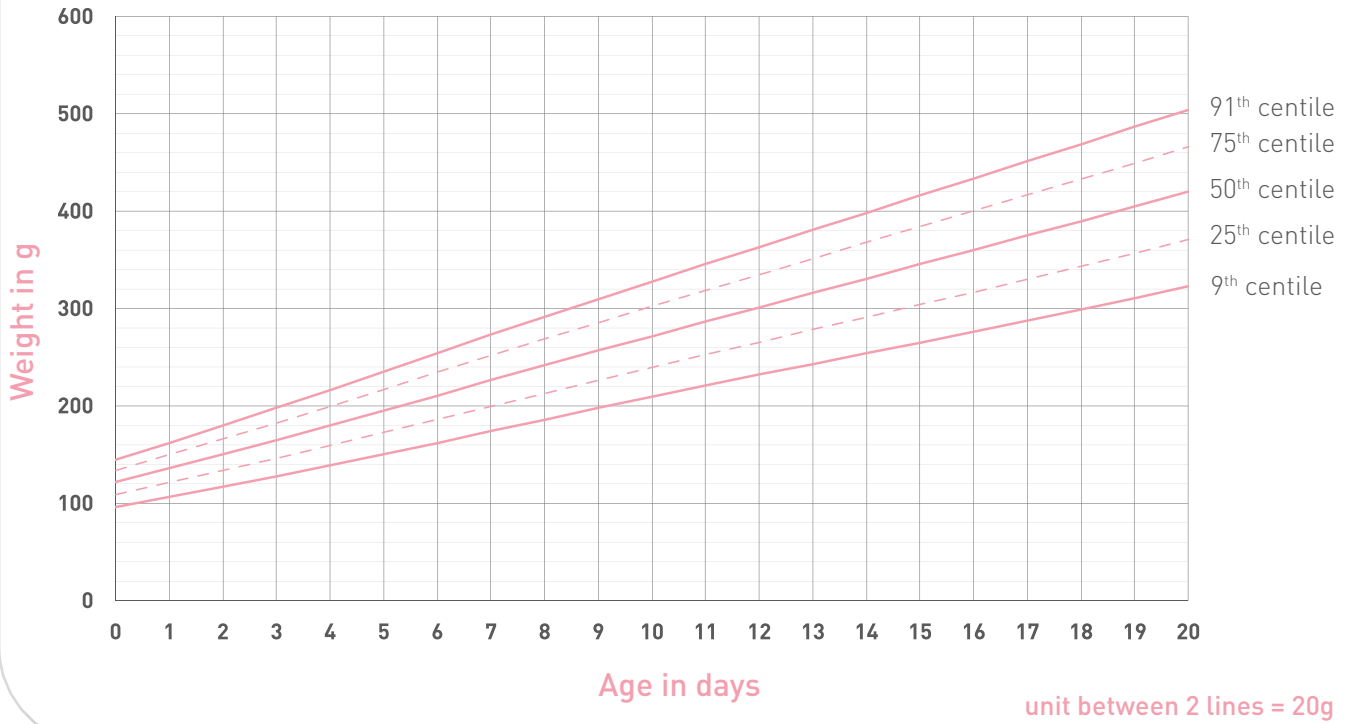
# KITTEN EARLY GROWTH CHART MAINE COON MALE



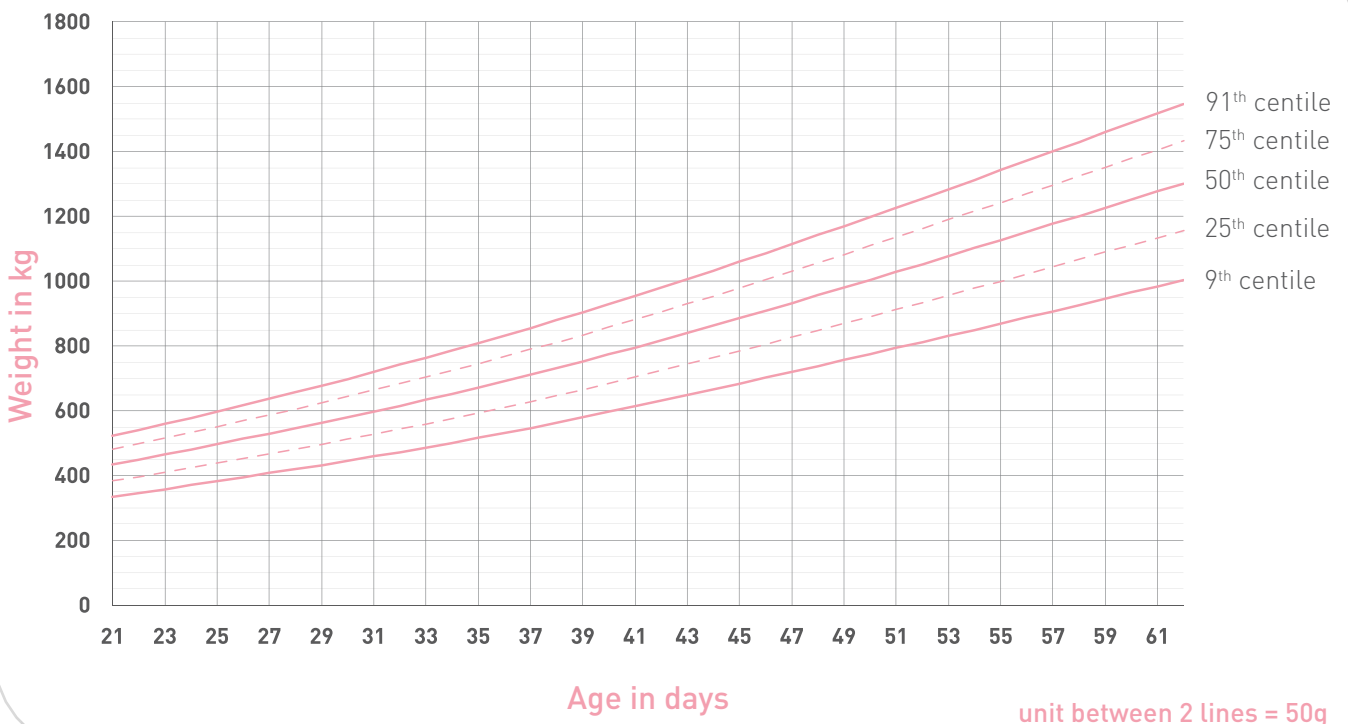
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





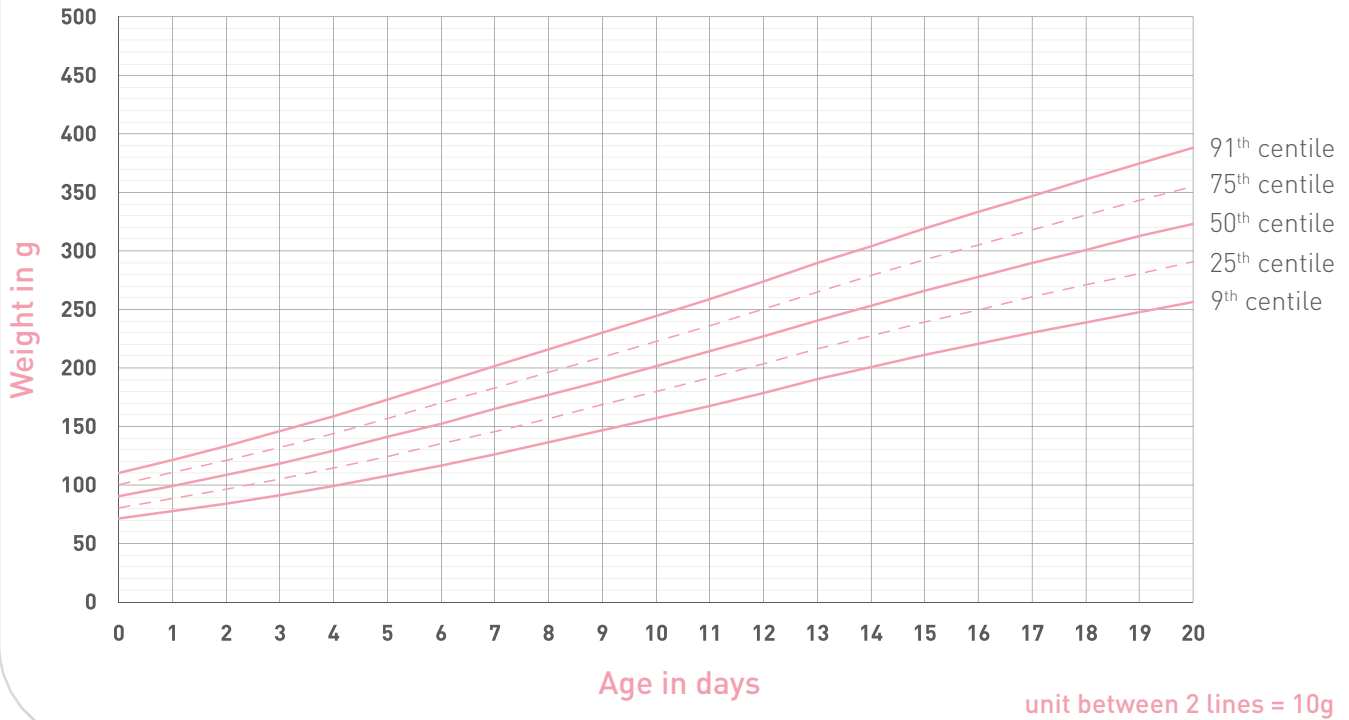
# KITTEN EARLY GROWTH CHART MANX



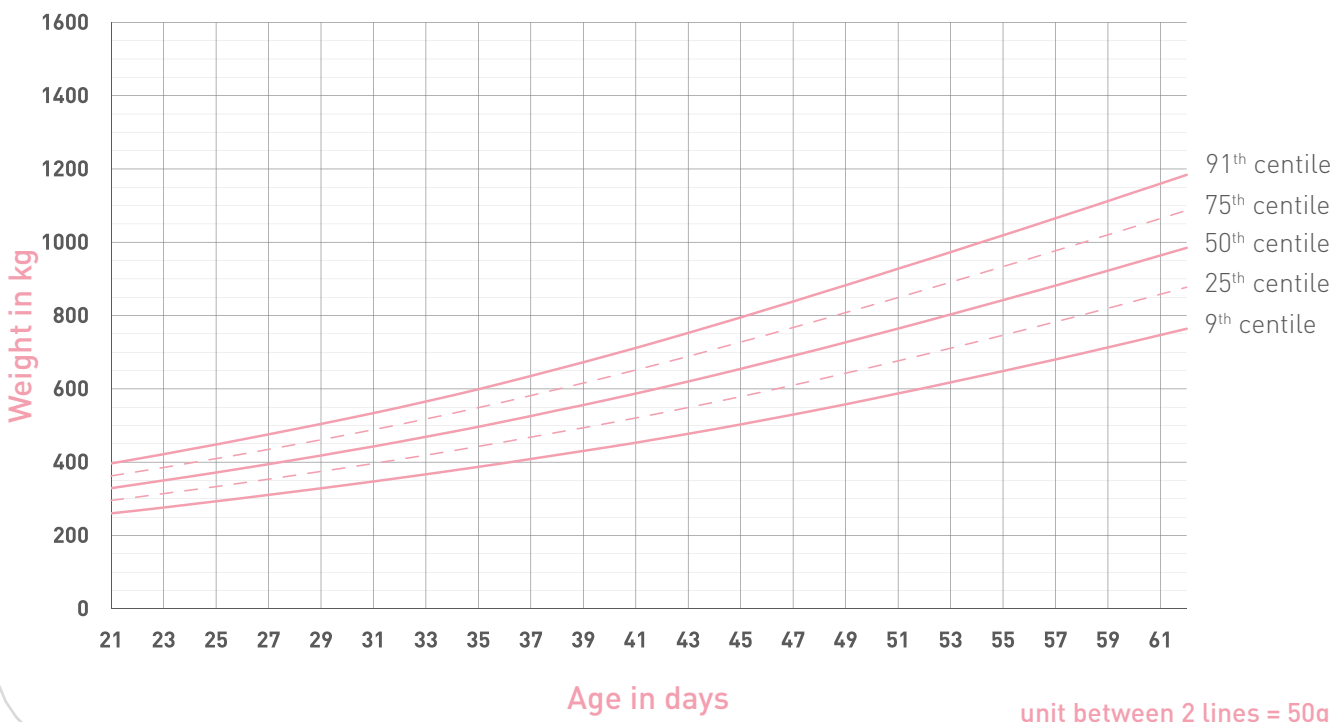
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days







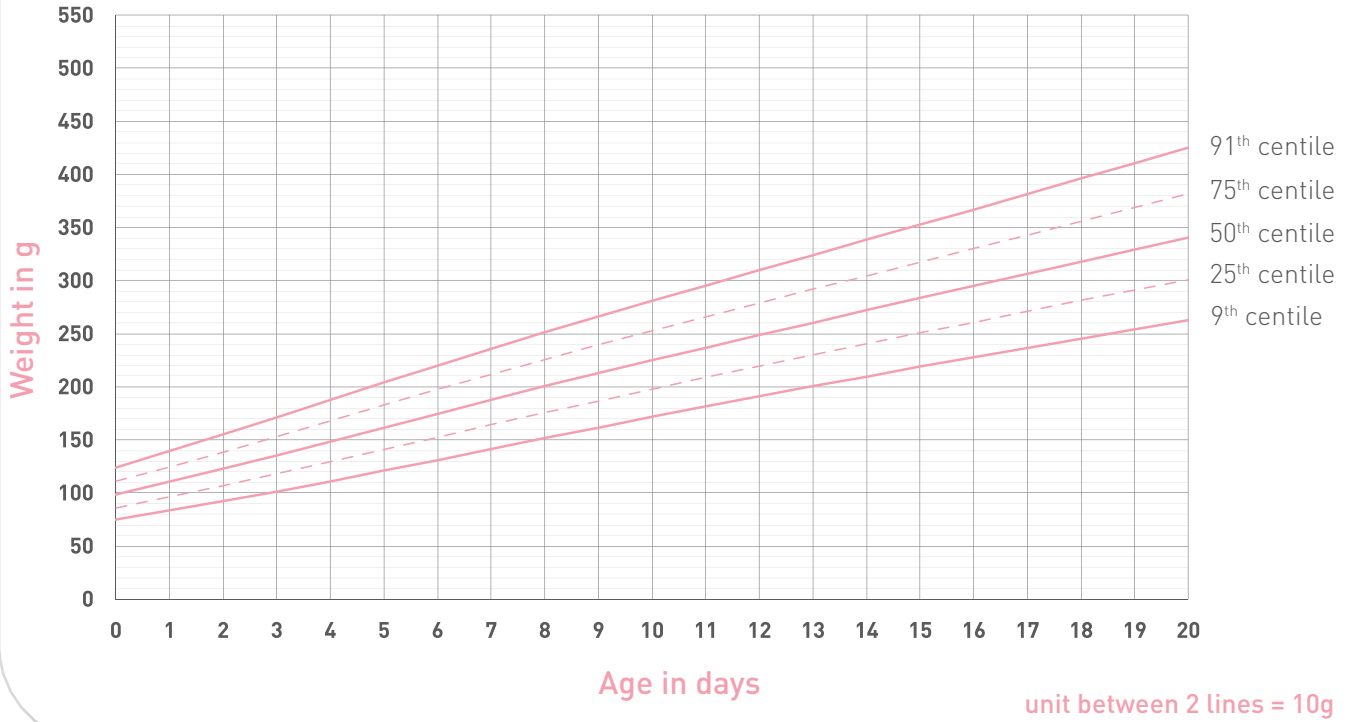
# KITTEN EARLY GROWTH CHART MUNCHKIN



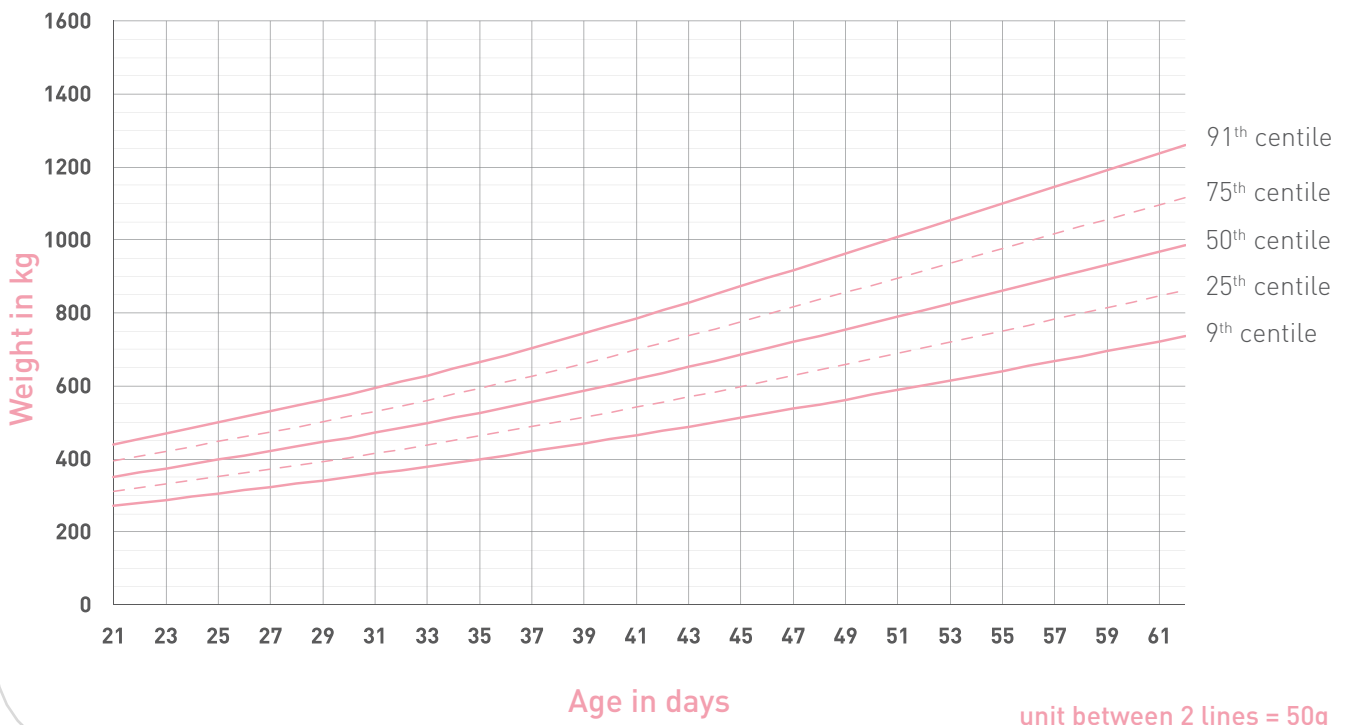
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Mother's name: ..... Father's name : .....

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## 21-62 days





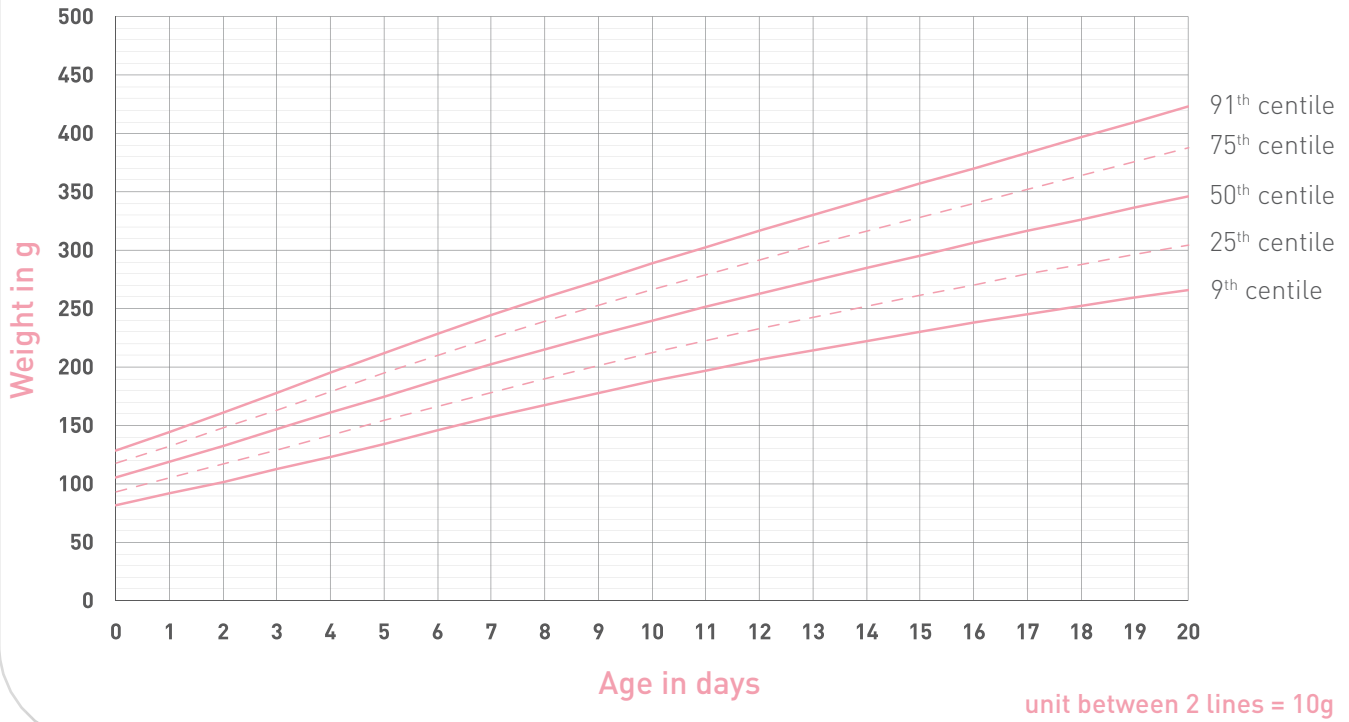
# KITTEN EARLY GROWTH CHART NORWEGIAN FEMALE



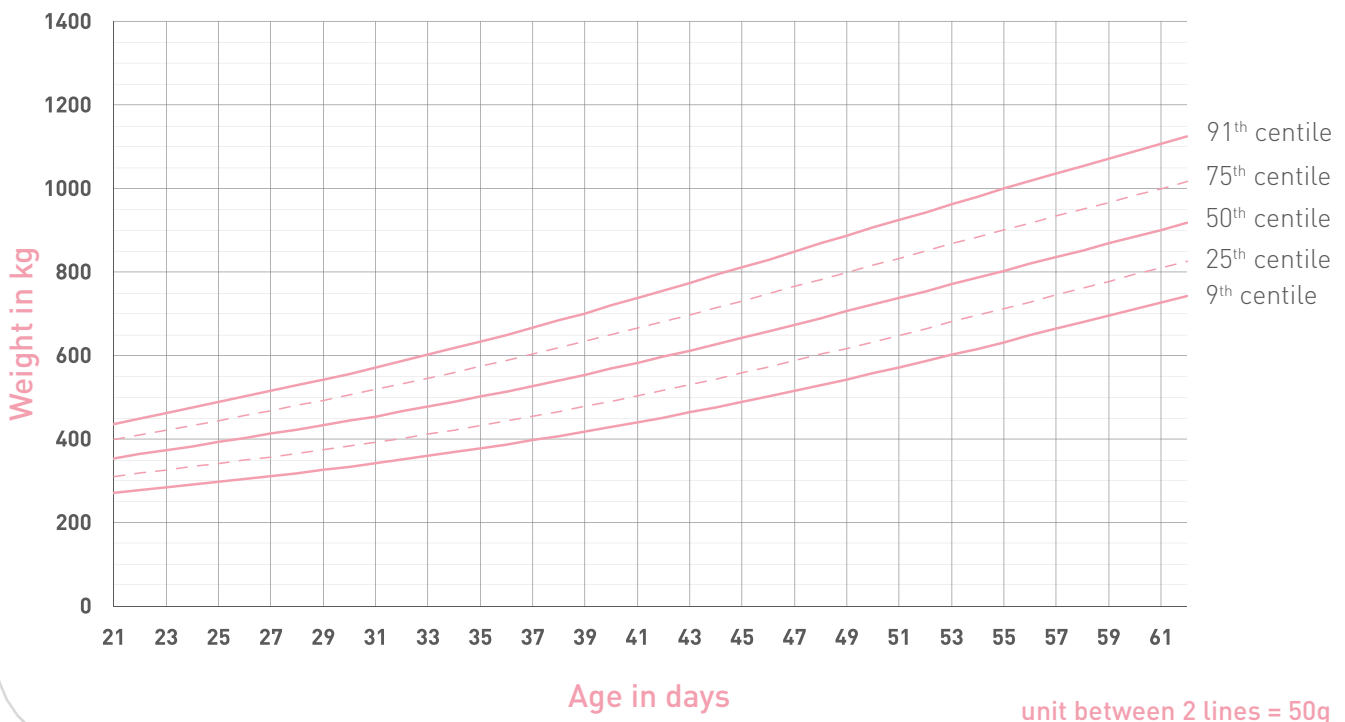
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





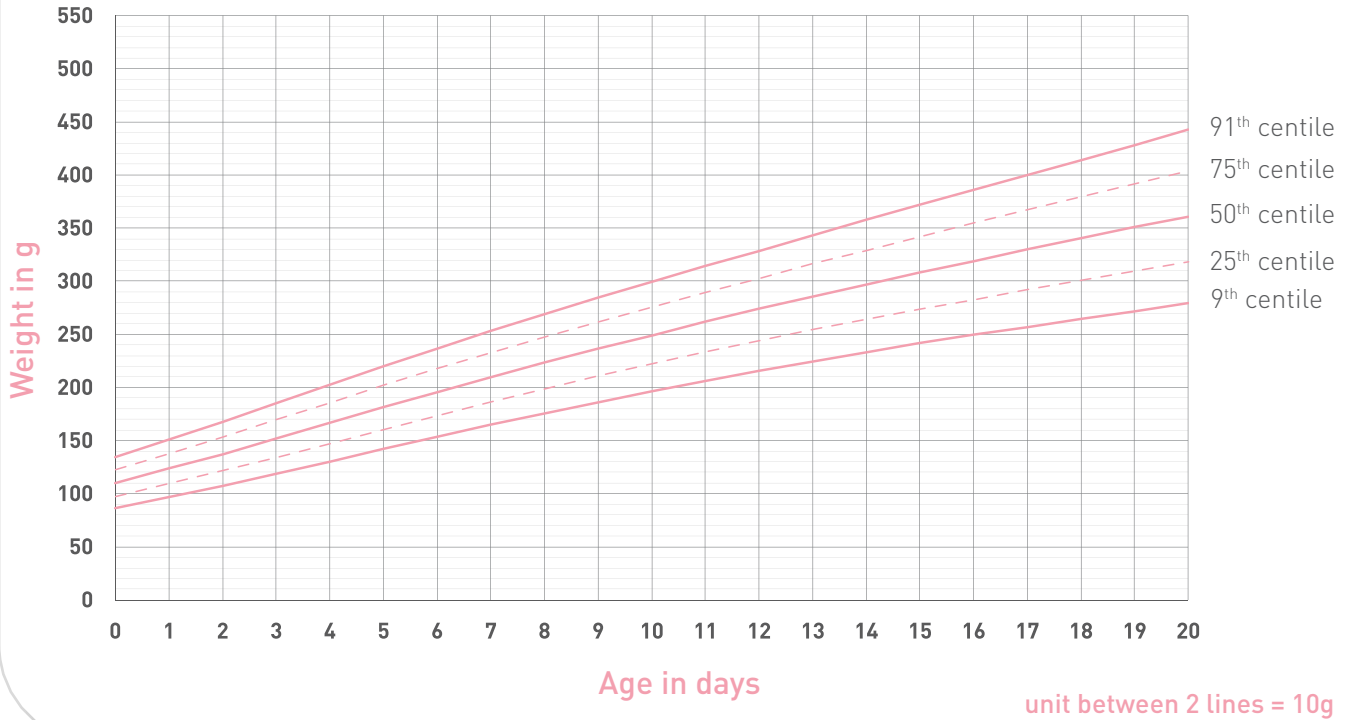
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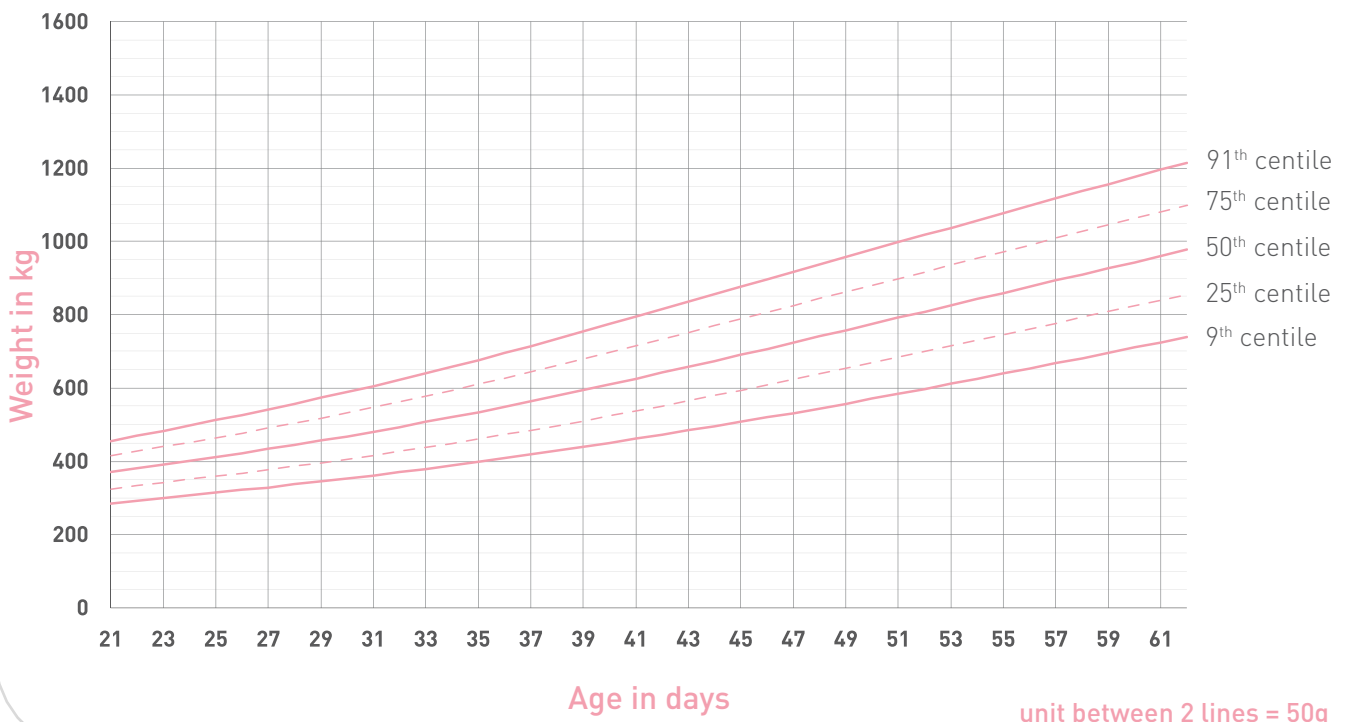
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Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





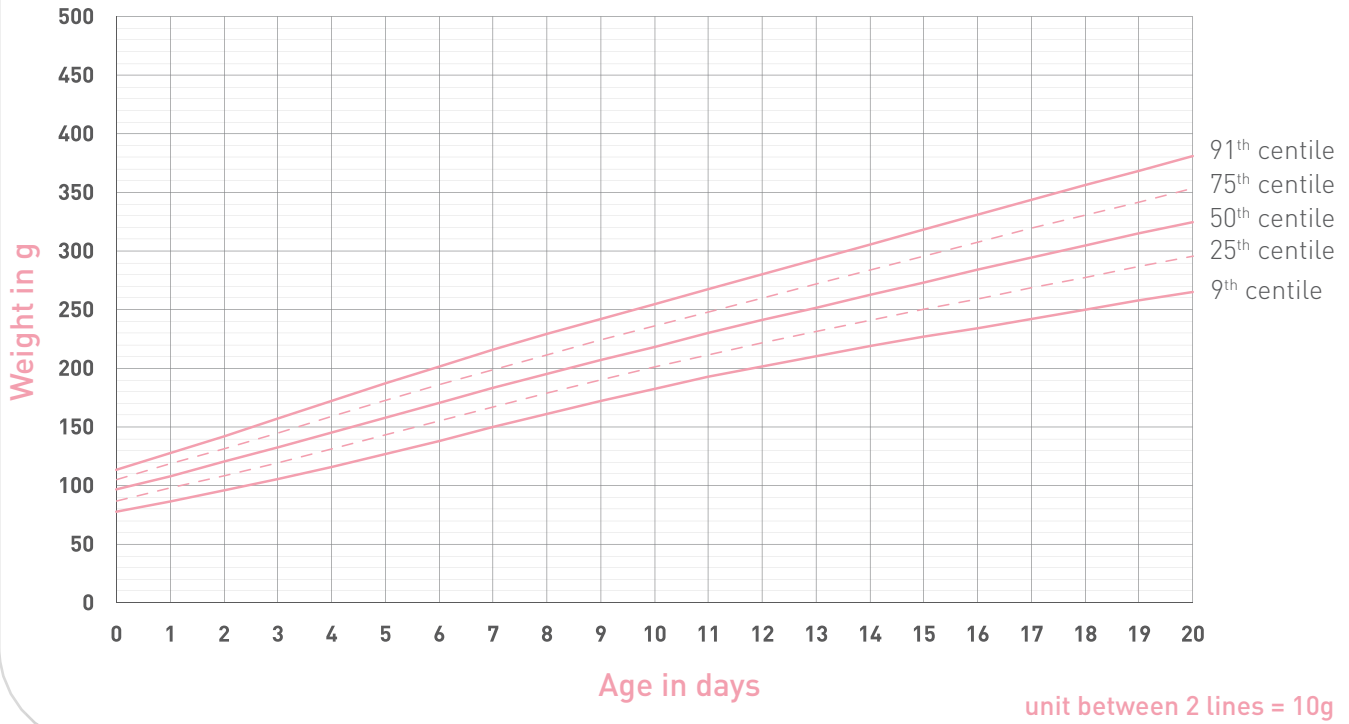
# KITTEN EARLY GROWTH CHART ORIENTAL



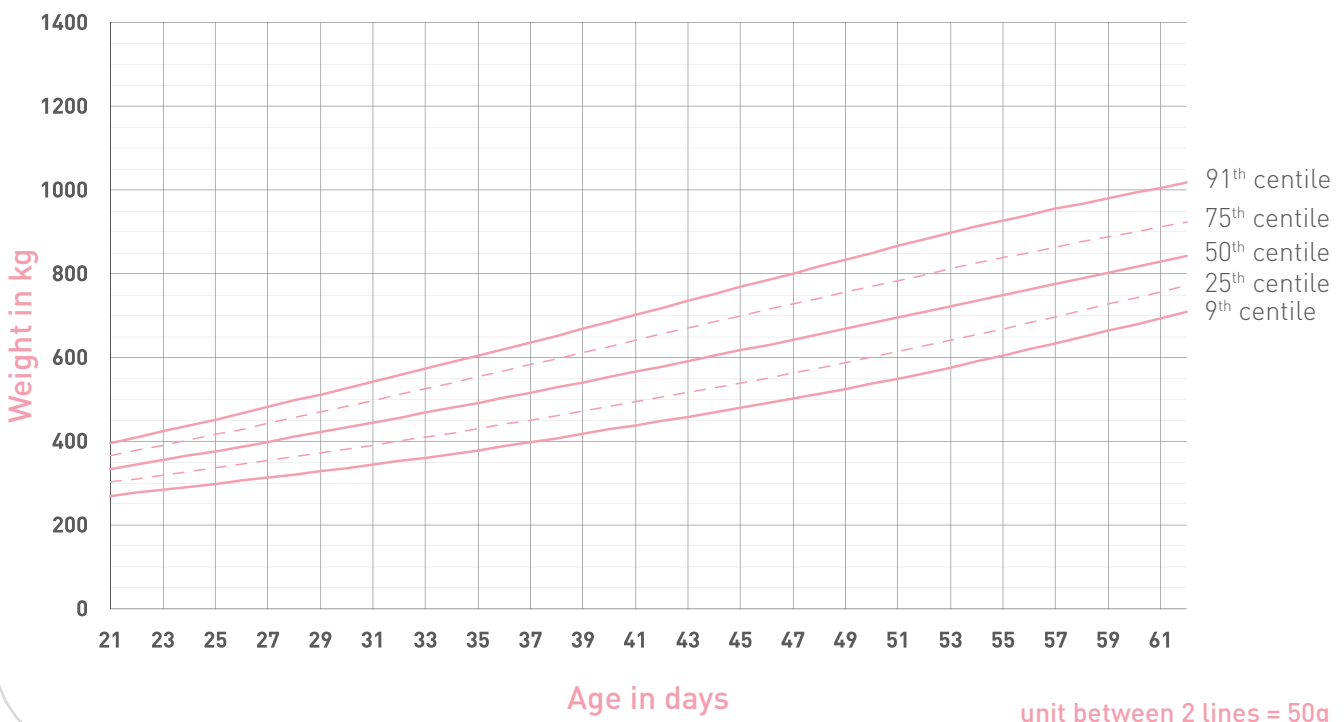
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





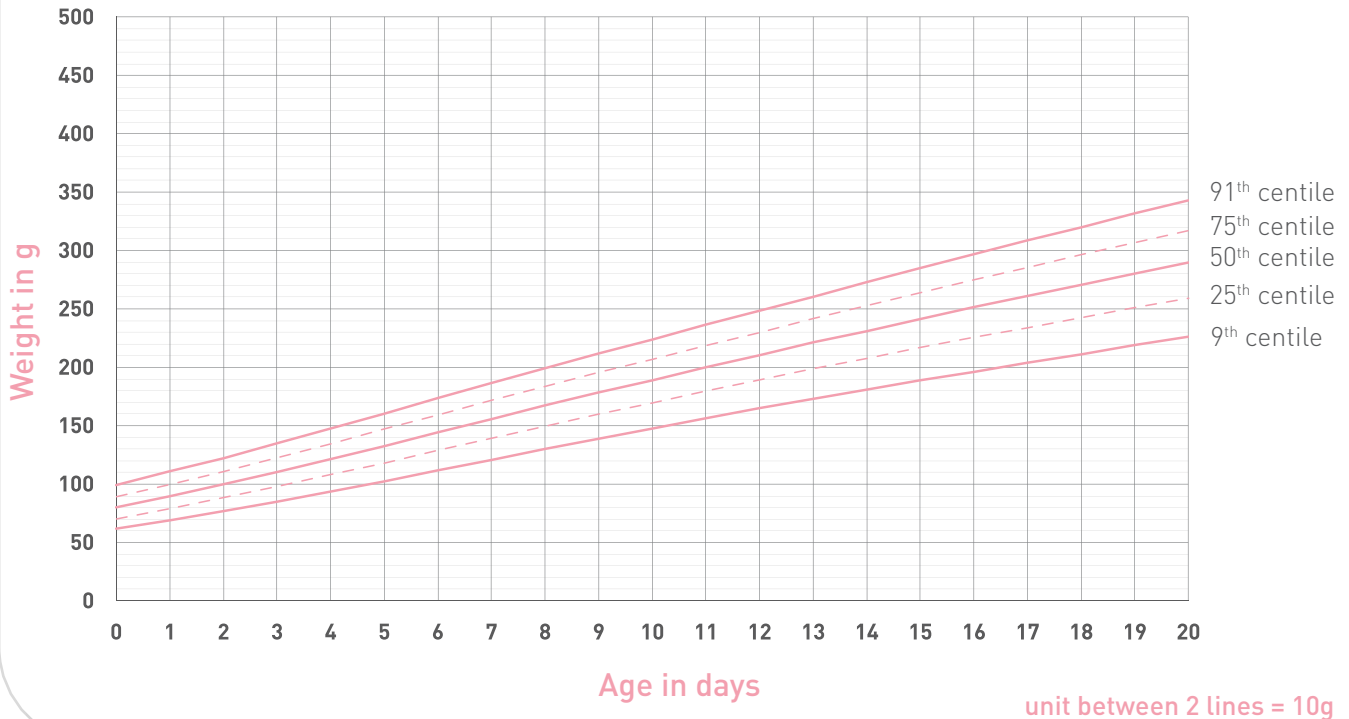
# KITTEN EARLY GROWTH CHART PERSIAN FEMALE



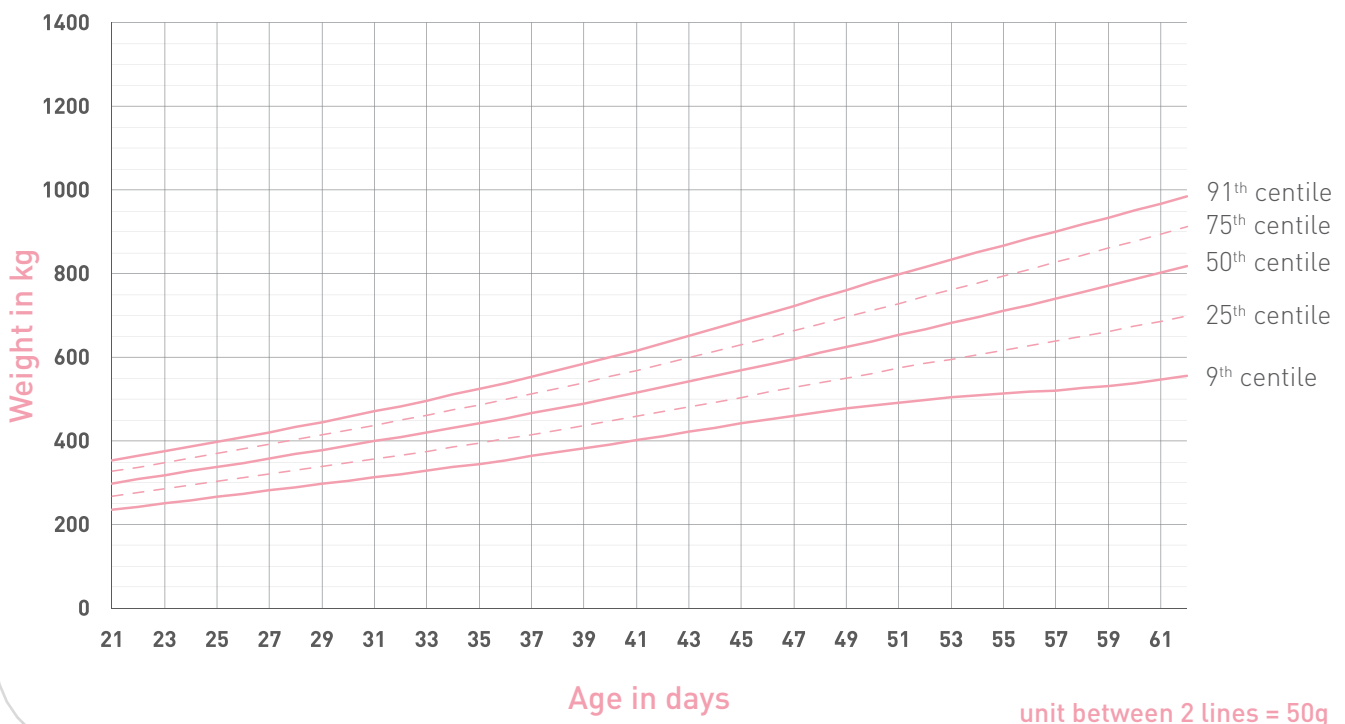
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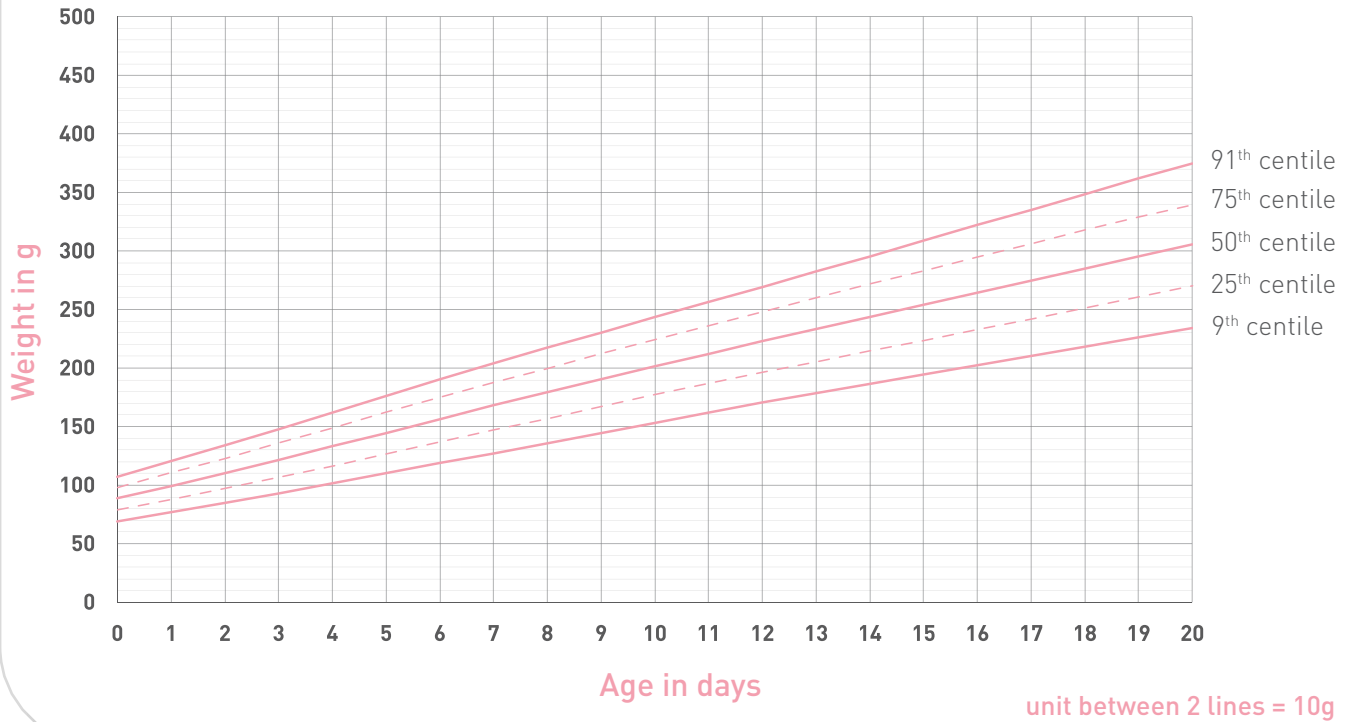
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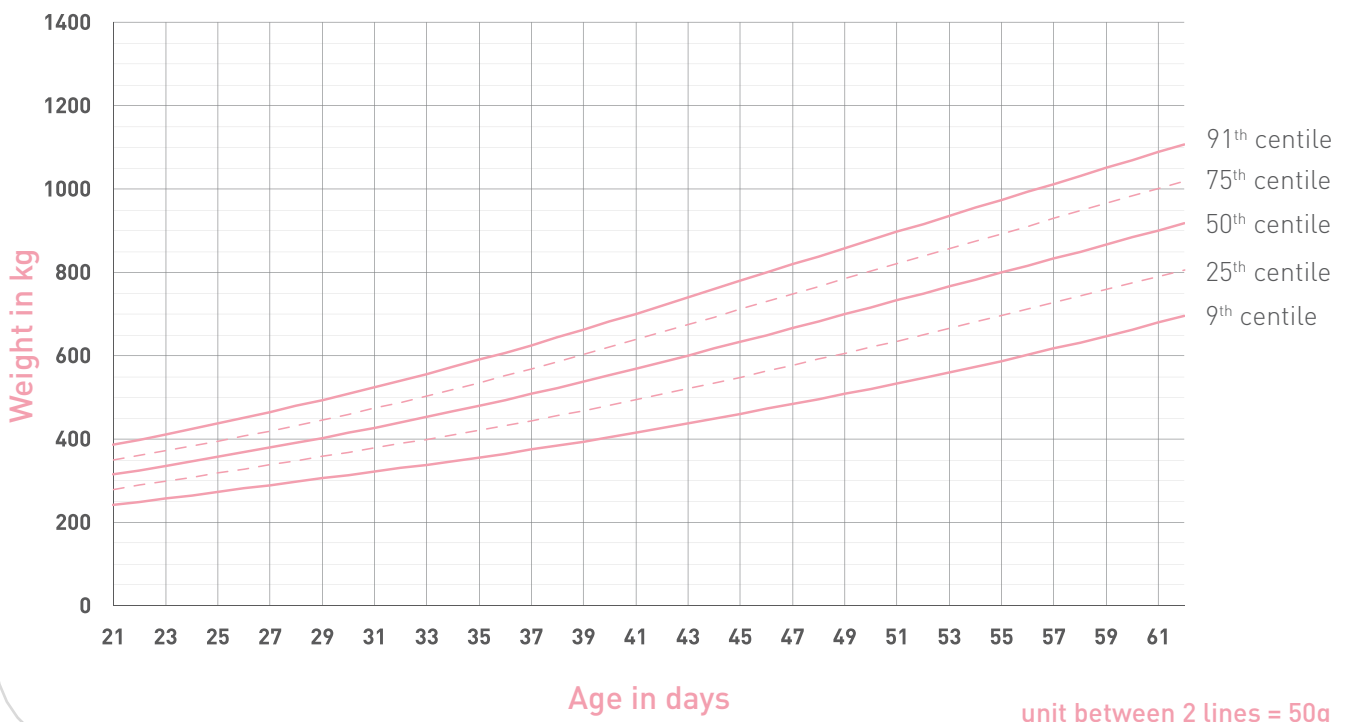
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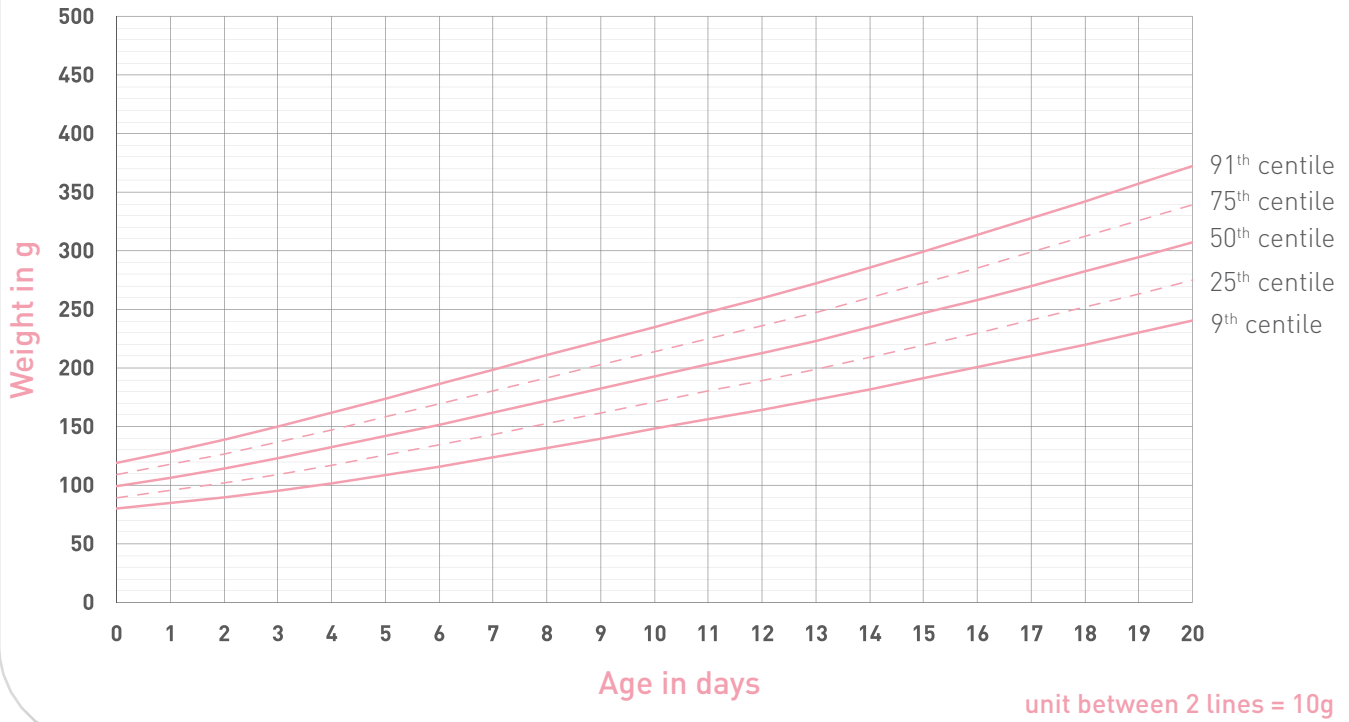
# KITTEN EARLY GROWTH CHART PETERBALD



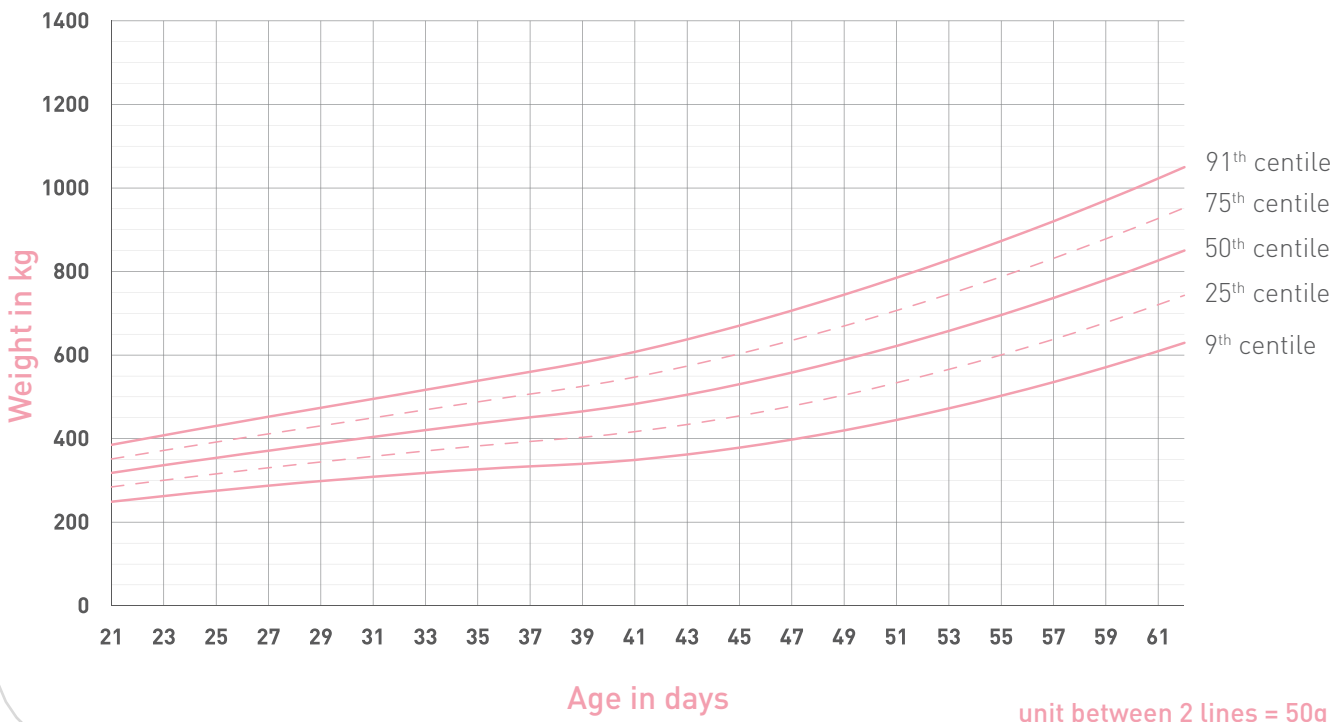
Kitten's name: ..... Date of birth : ..... / ..... / .....

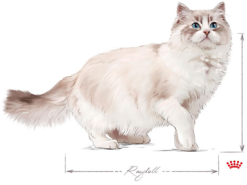
Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





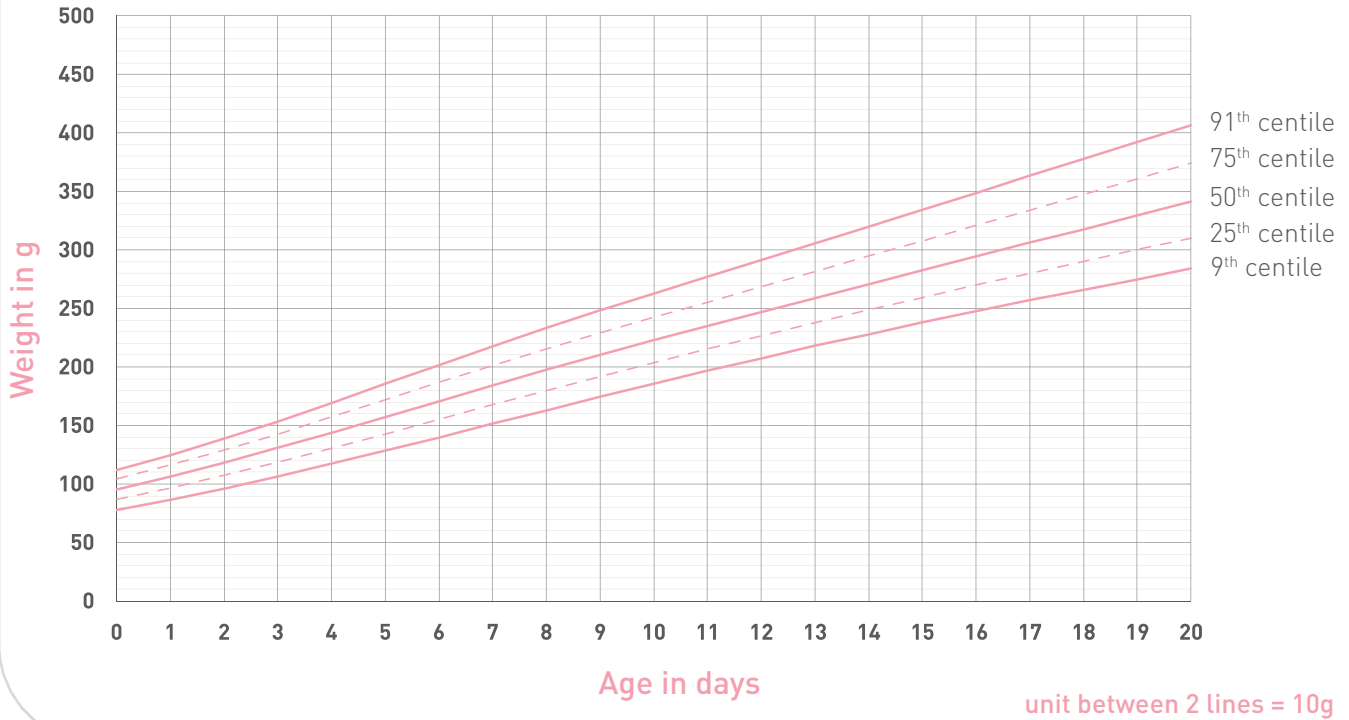
# KITTEN EARLY GROWTH CHART RAGDOLL FEMALE



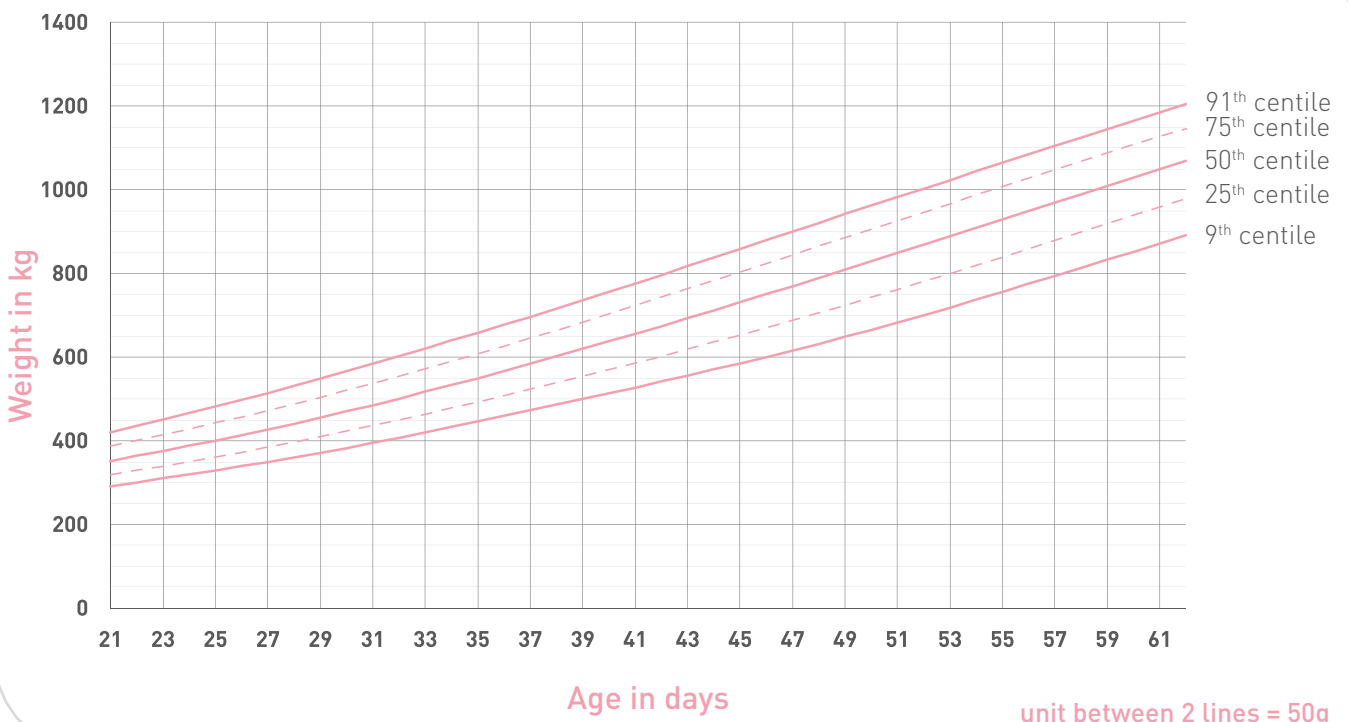
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

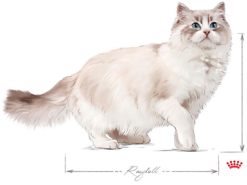
## 0-20 days



## 21-62 days







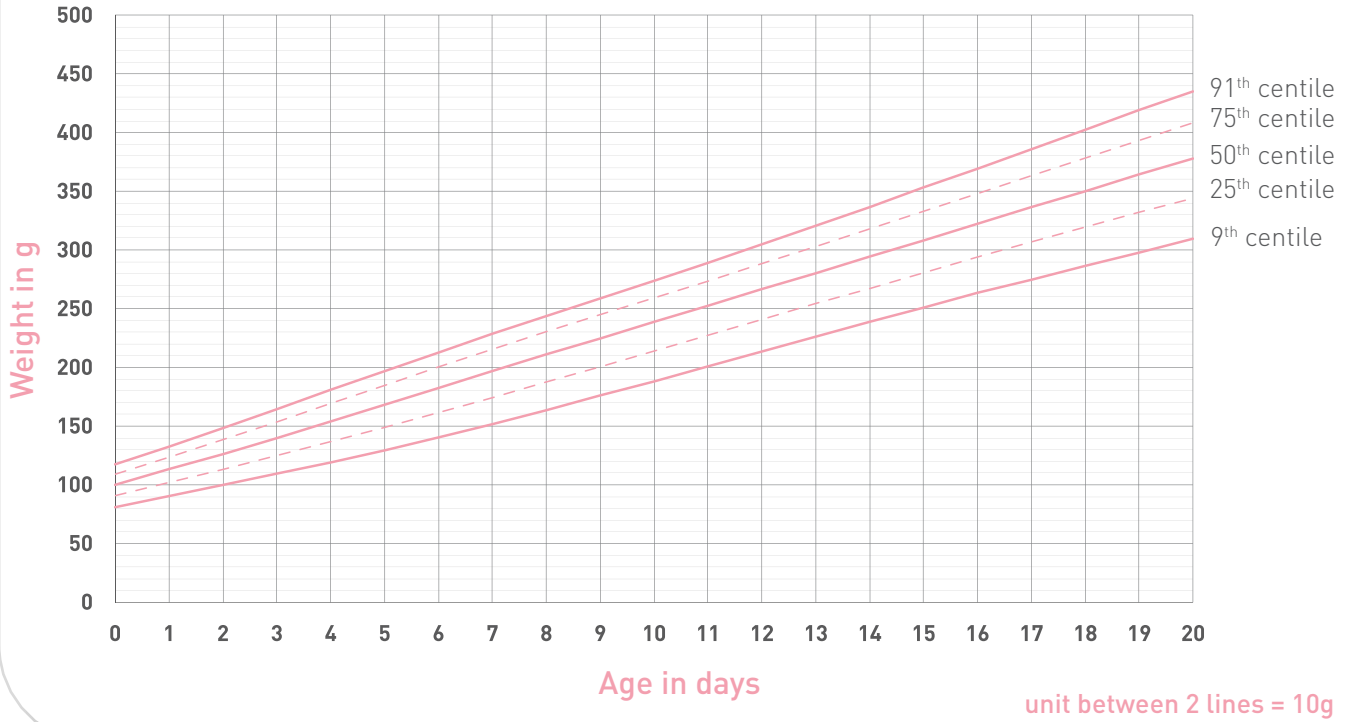
# KITTEN EARLY GROWTH CHART RAGDOLL MALE



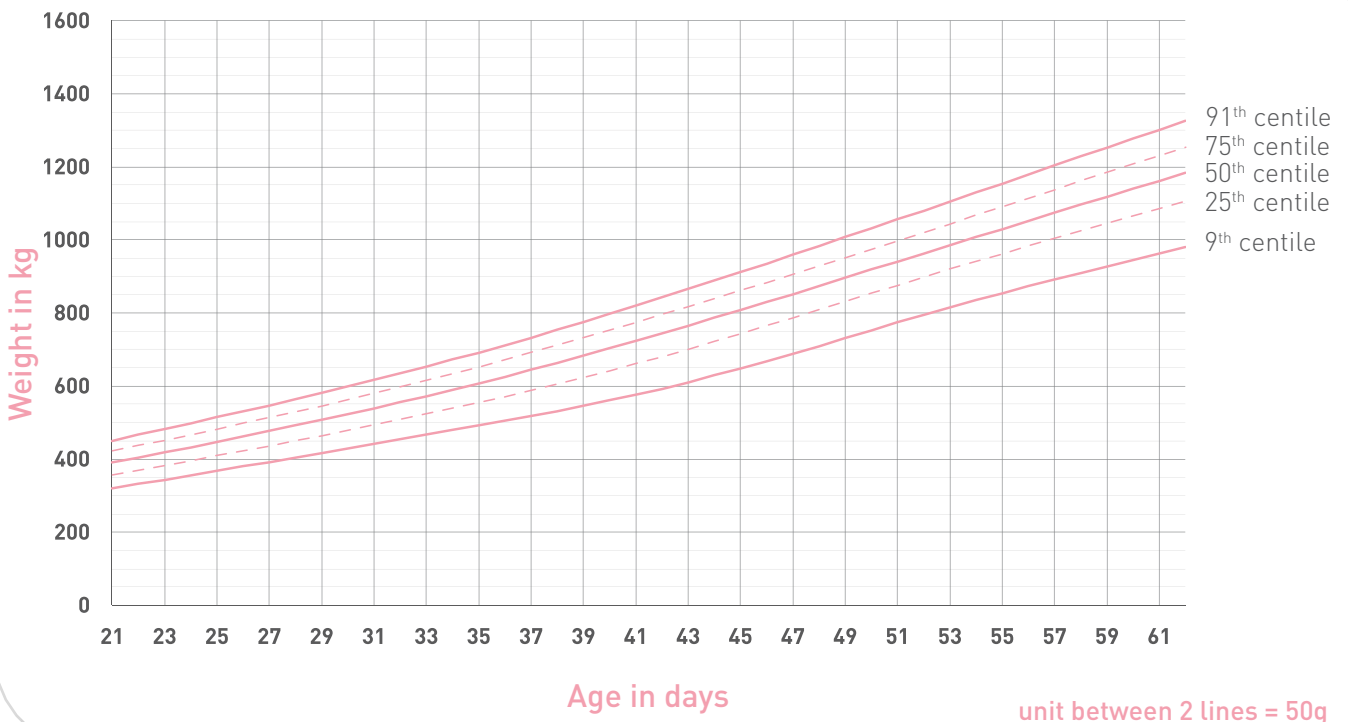
Kitten's name: ..... Date of birth : ..... / ..... / .....

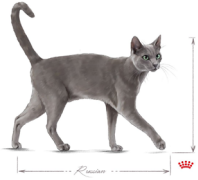
Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





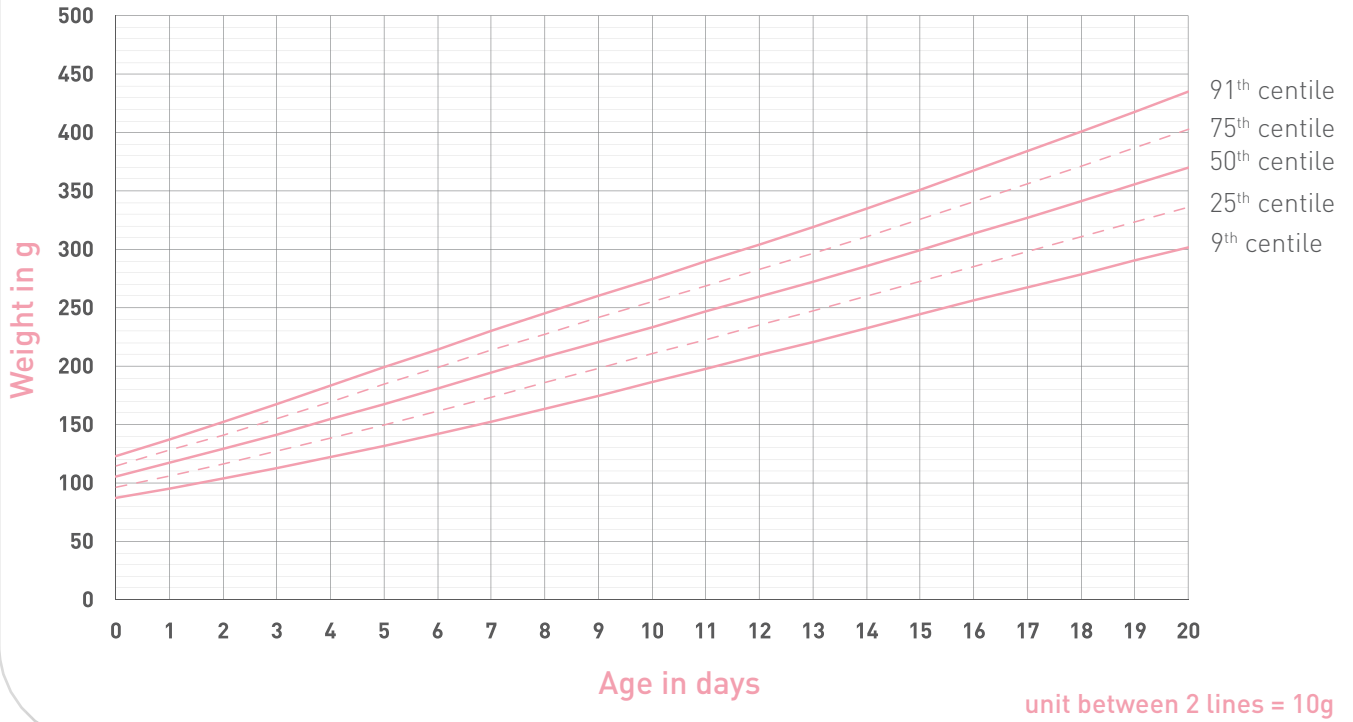
# KITTEN EARLY GROWTH CHART RUSSIAN



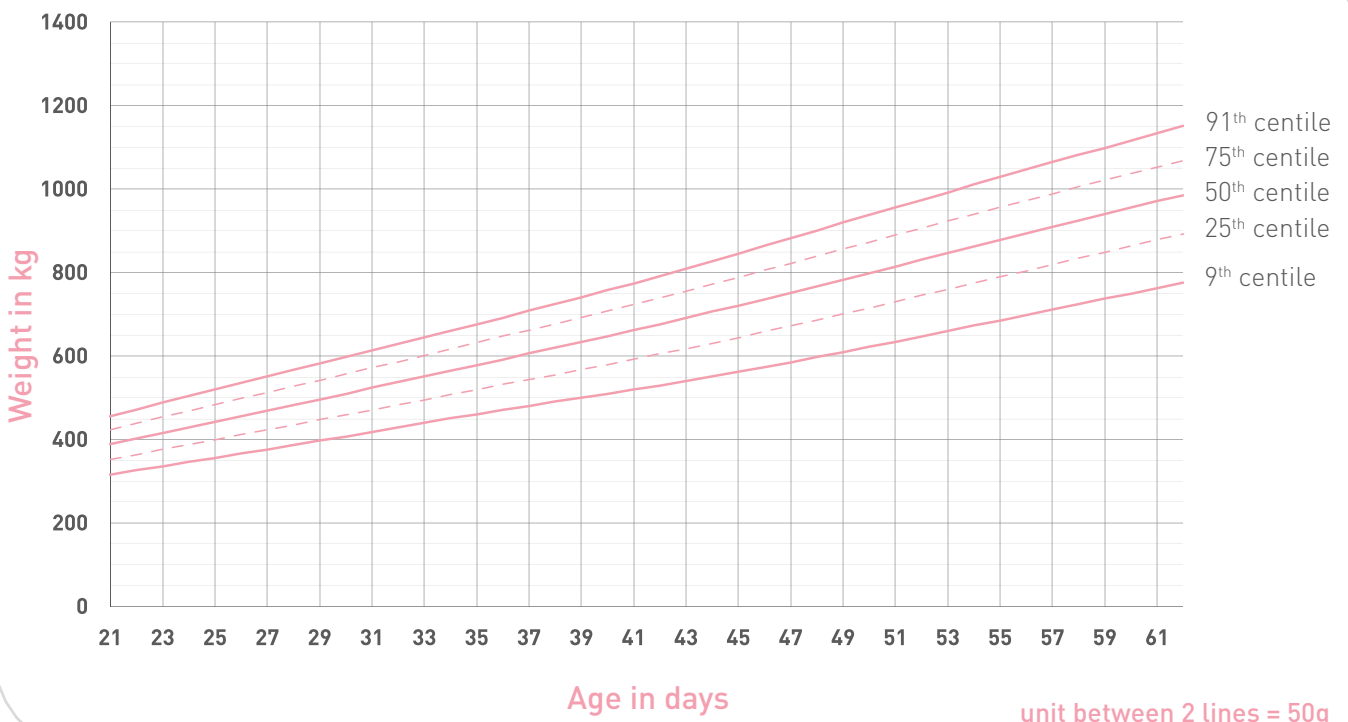
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





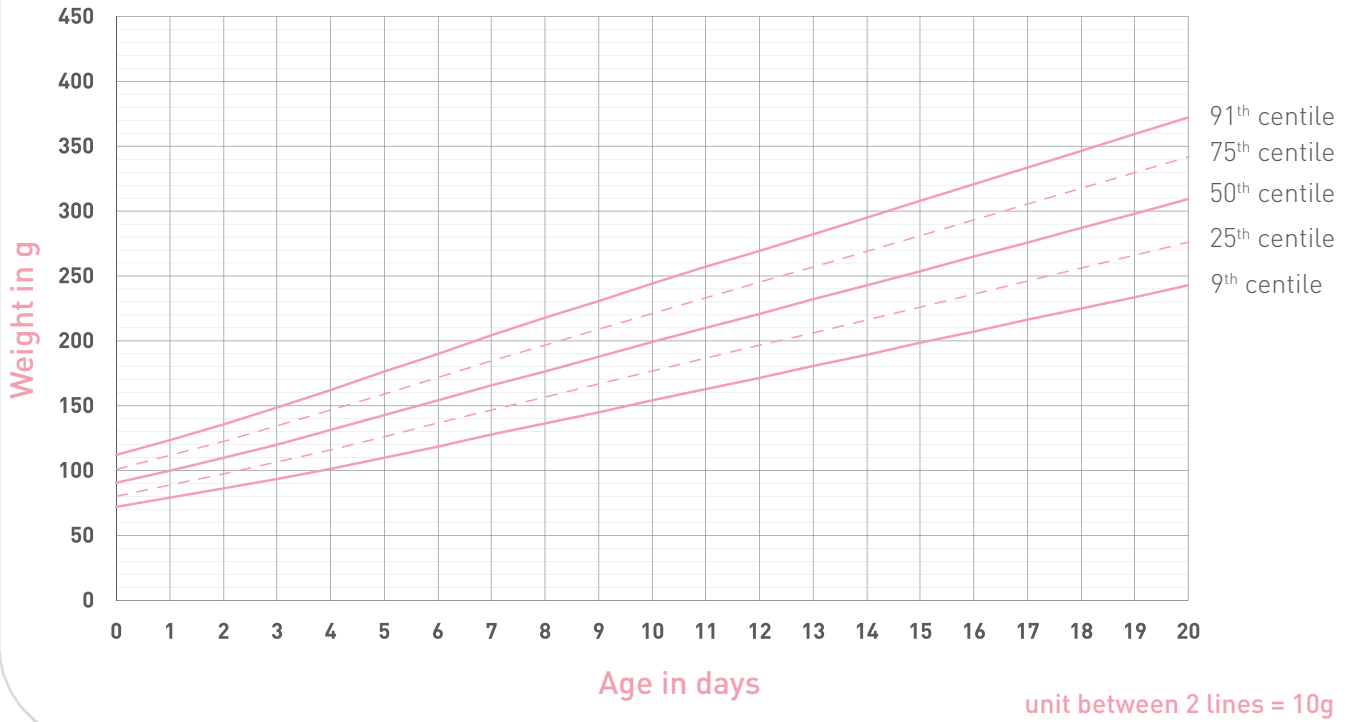
# KITTEN EARLY GROWTH CHART SACRED BIRMAN FEMALE



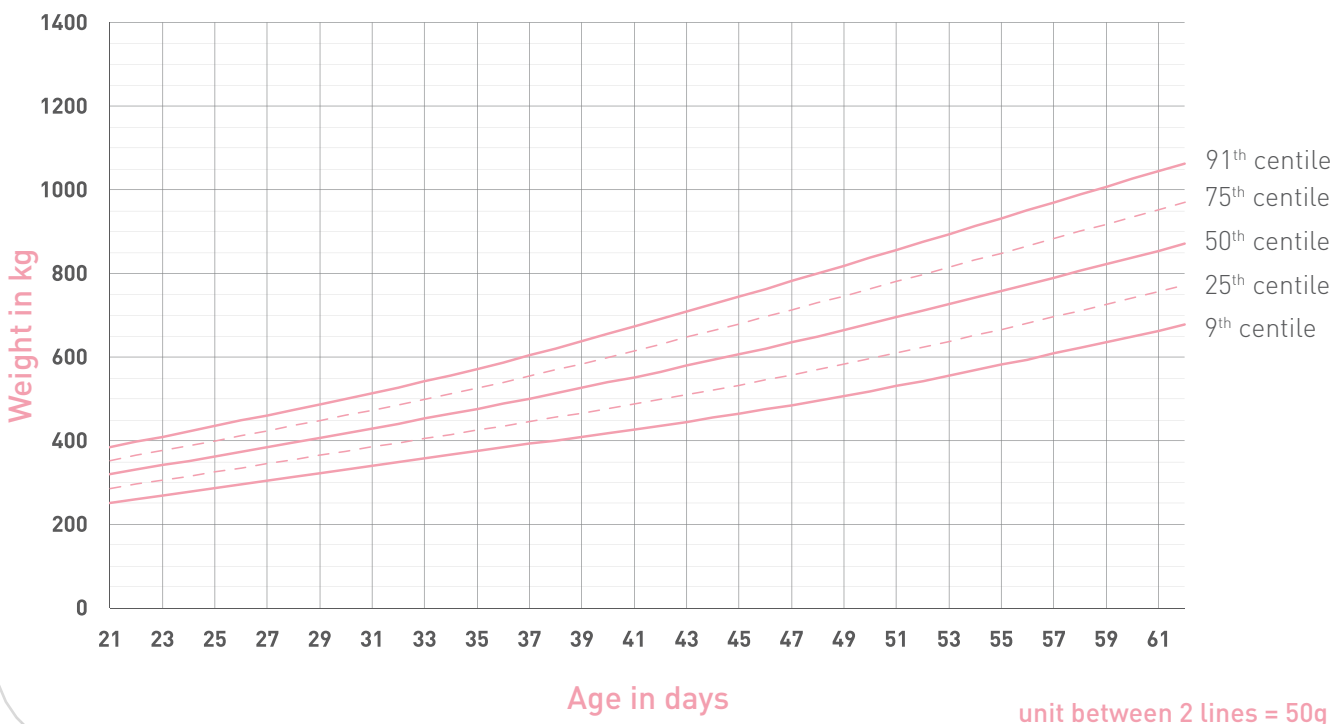
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





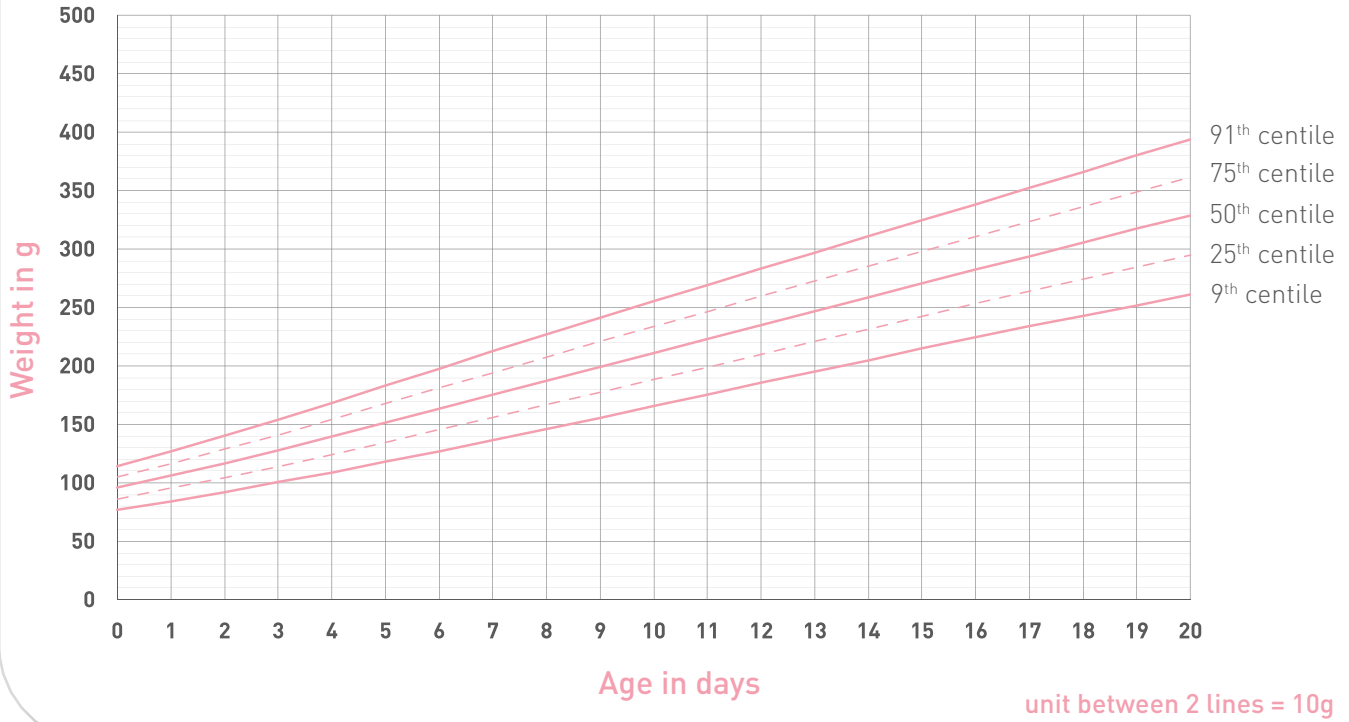
# KITTEN EARLY GROWTH CHART SACRED BIRMAN MALE



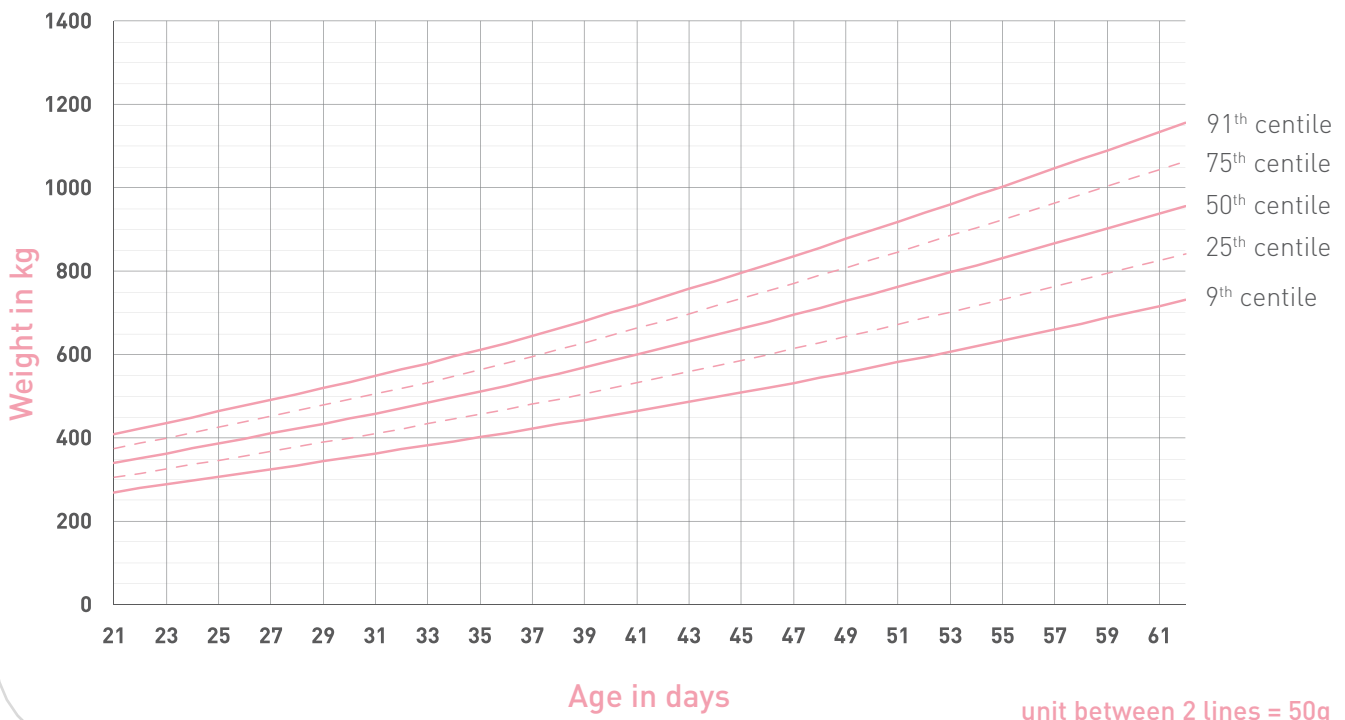
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





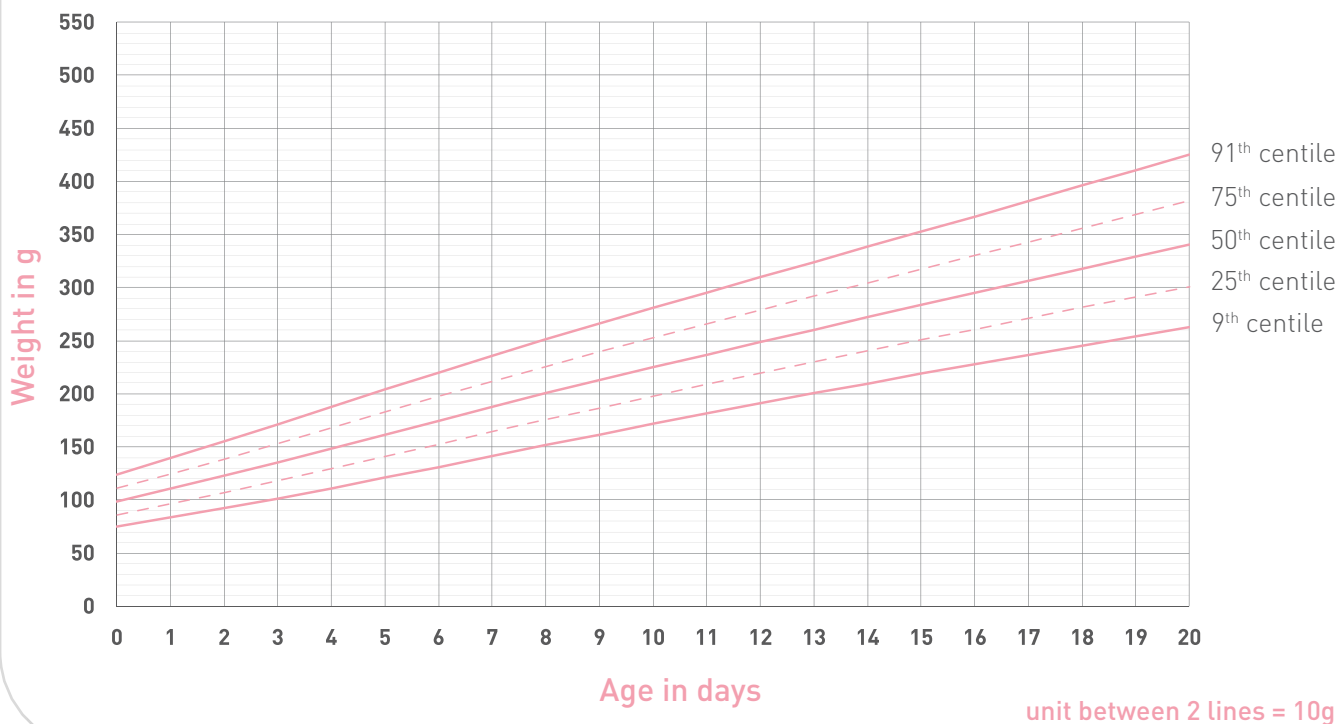
# KITTEN EARLY GROWTH CHART SAVANNAH



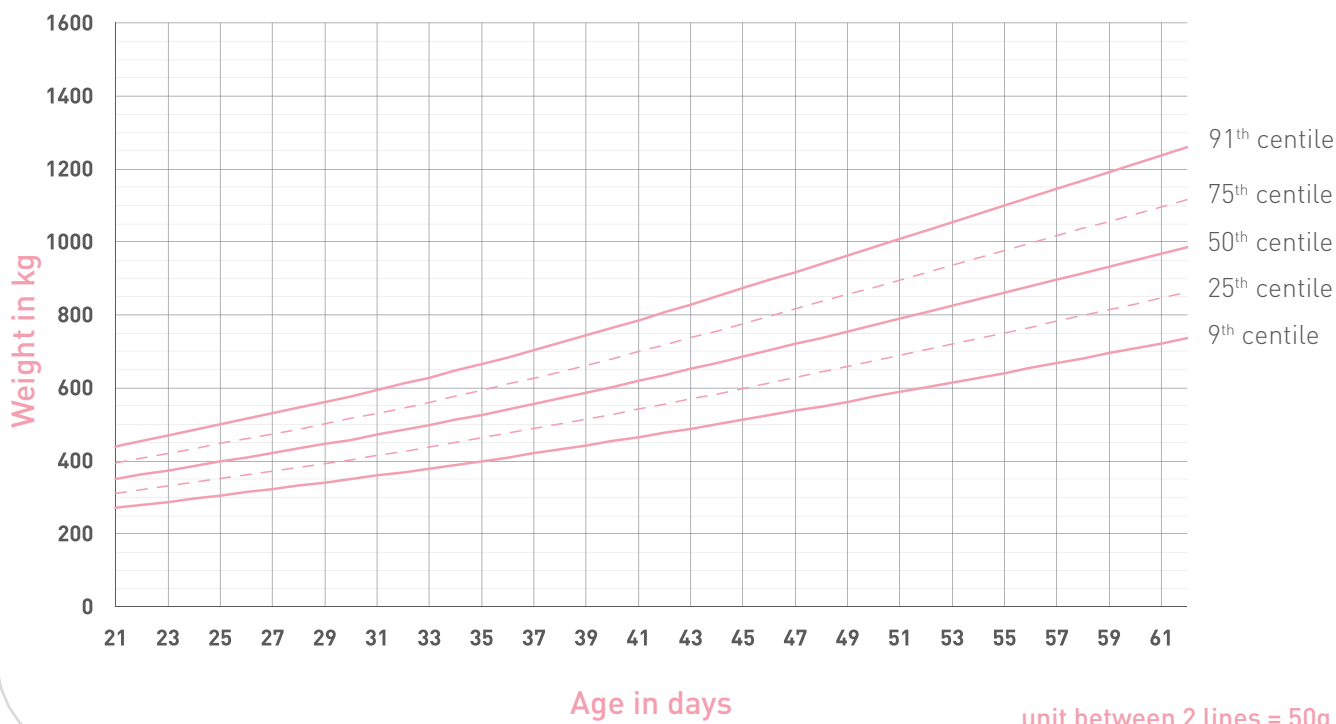
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





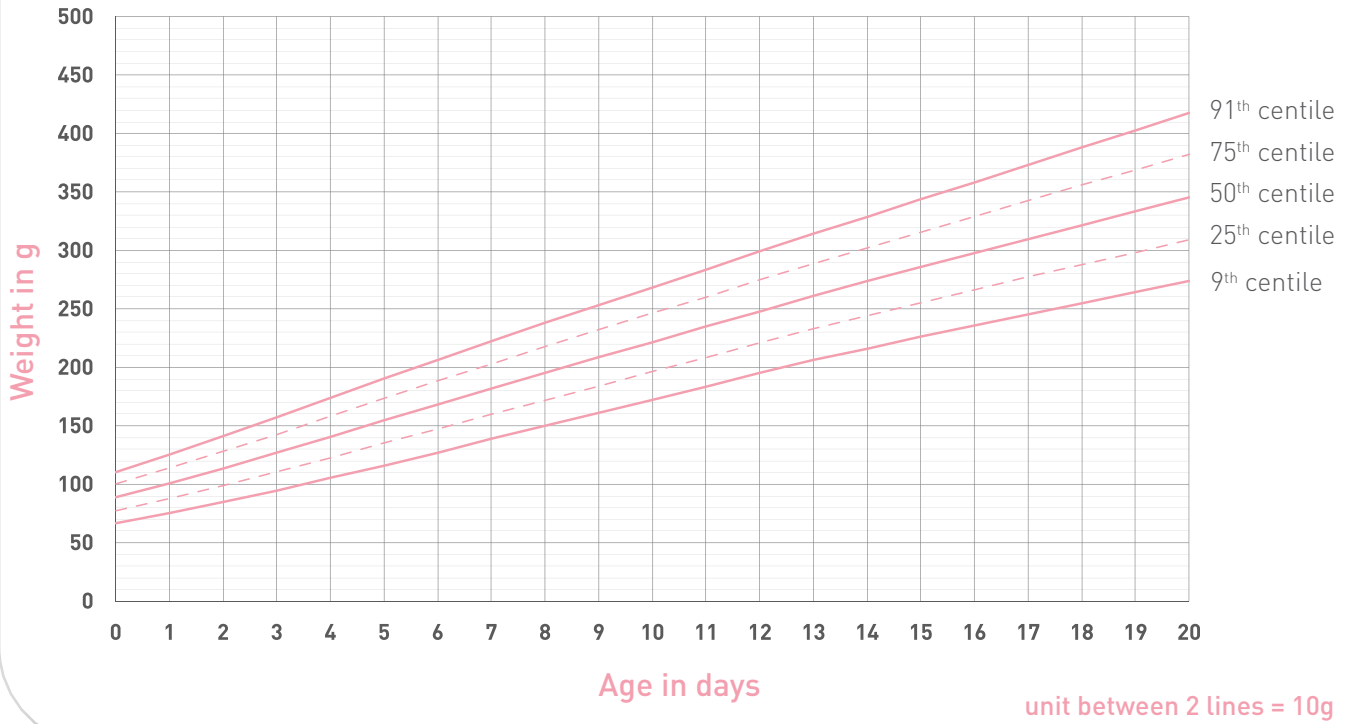
# KITTEN EARLY GROWTH CHART SCOTTISH FOLD



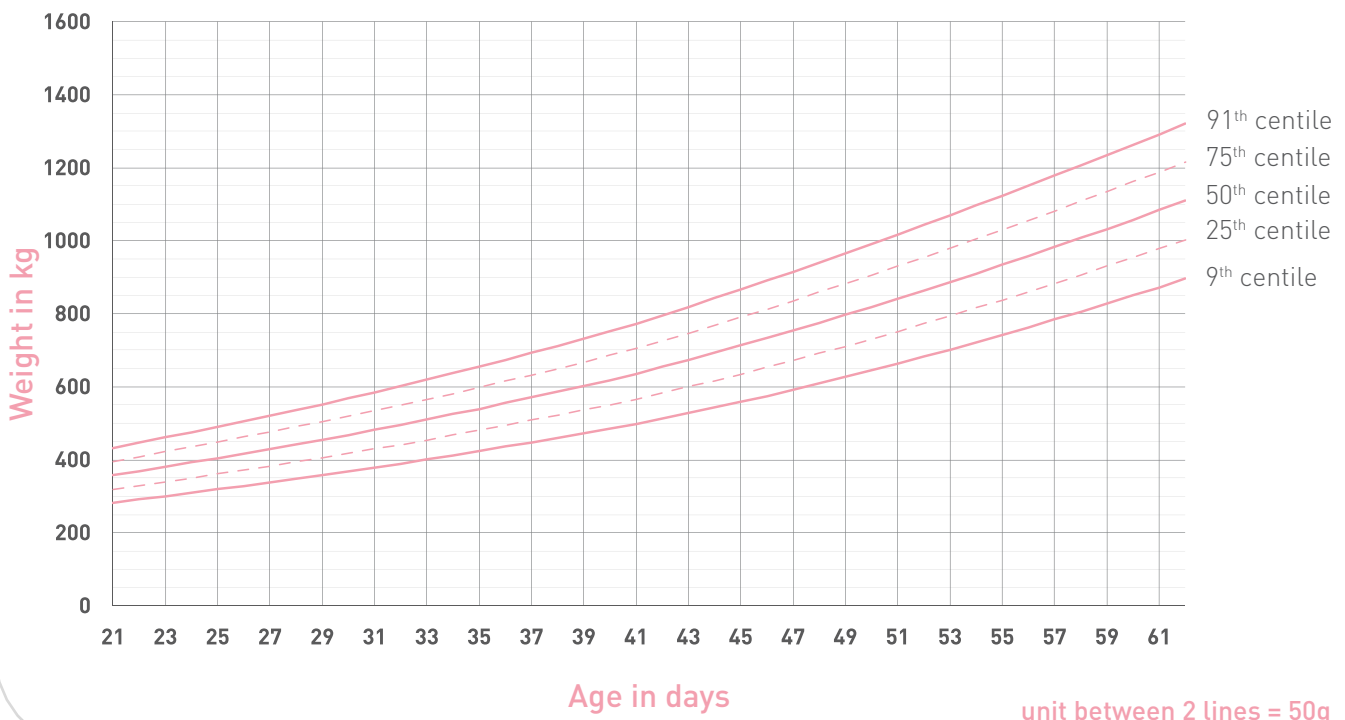
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





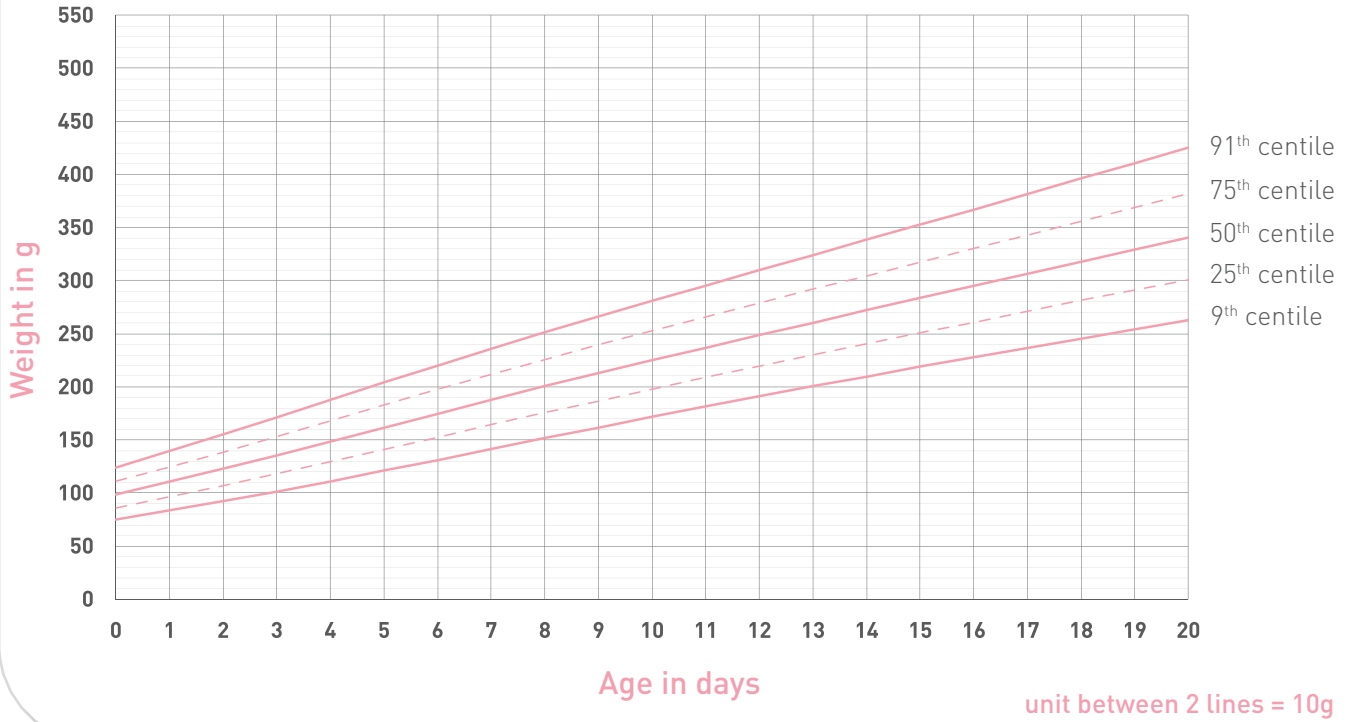
# KITTEN EARLY GROWTH CHART SCOTTISH STRAIGHT



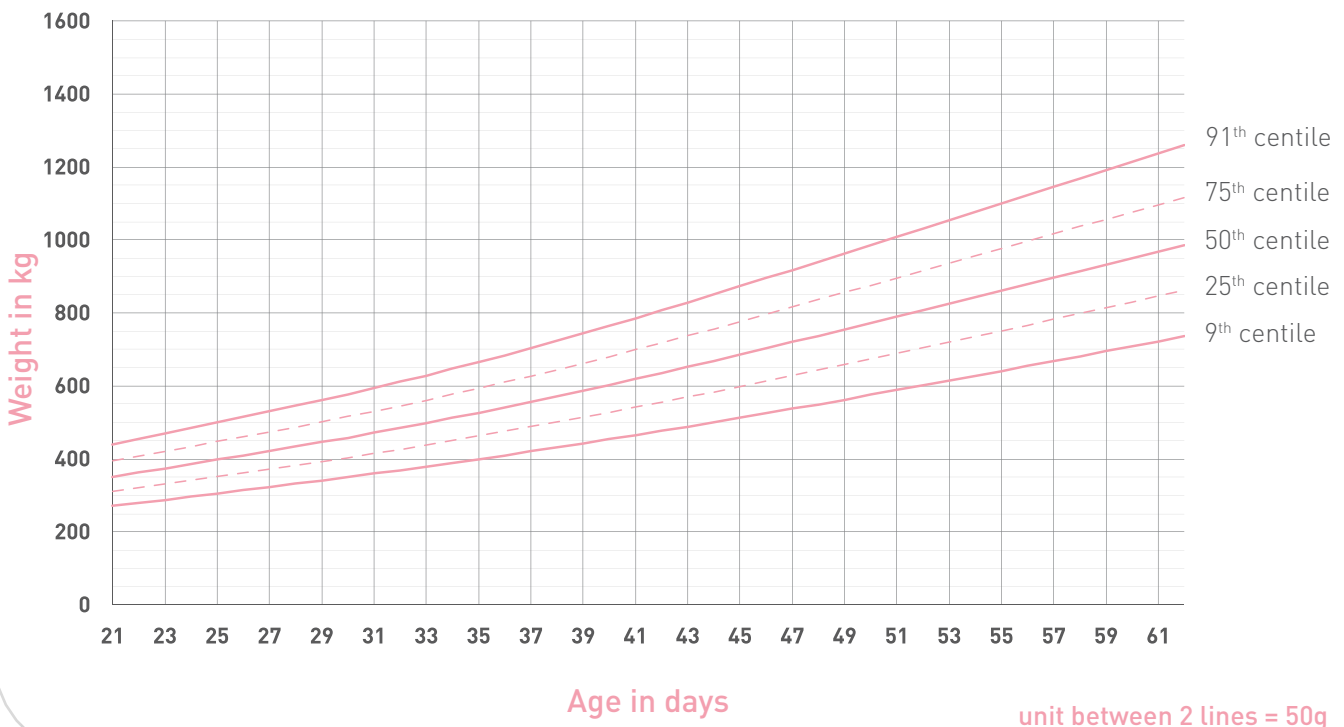
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





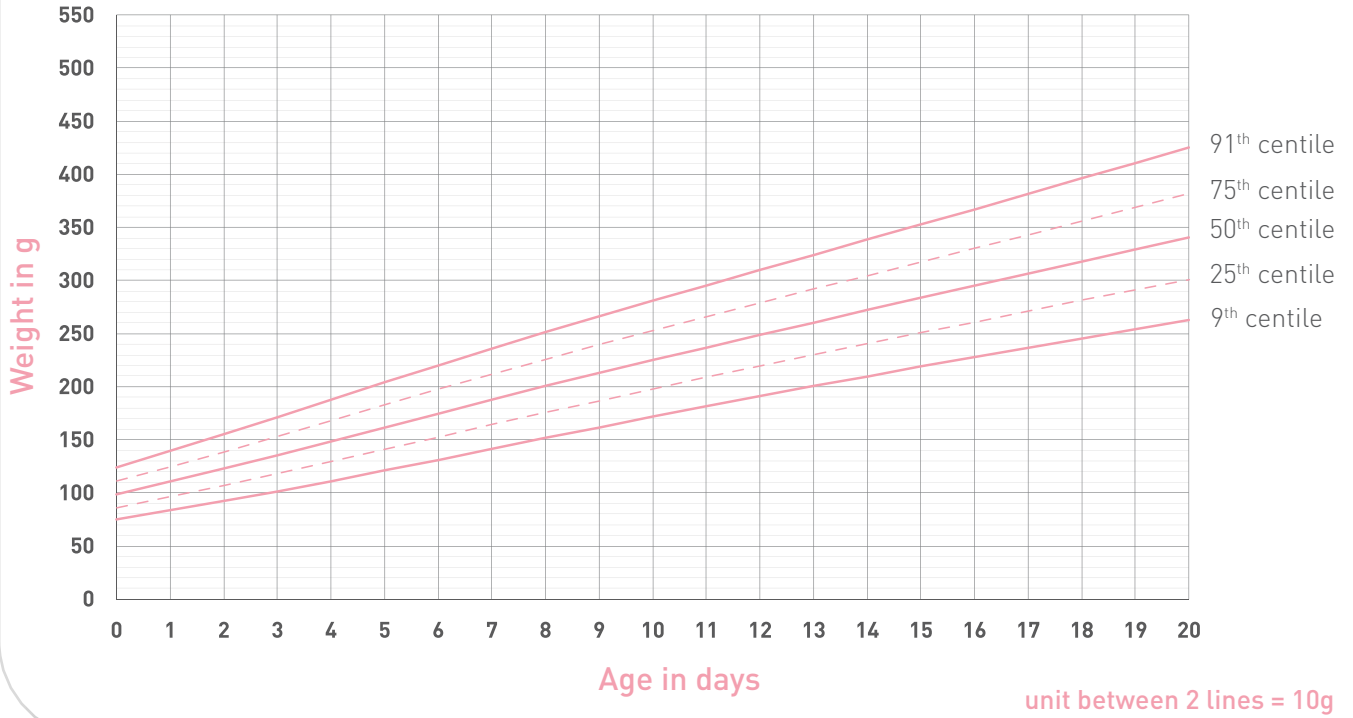
# KITTEN EARLY GROWTH CHART SELKIRK REX



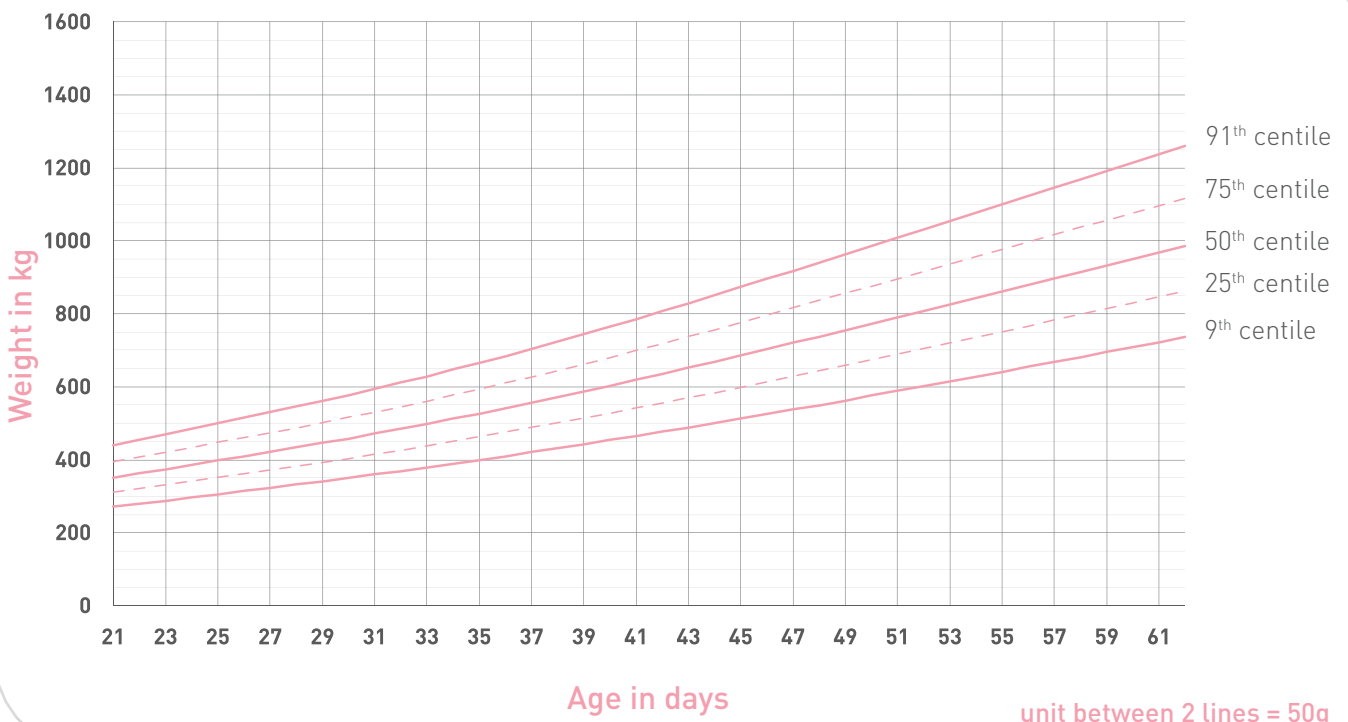
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days







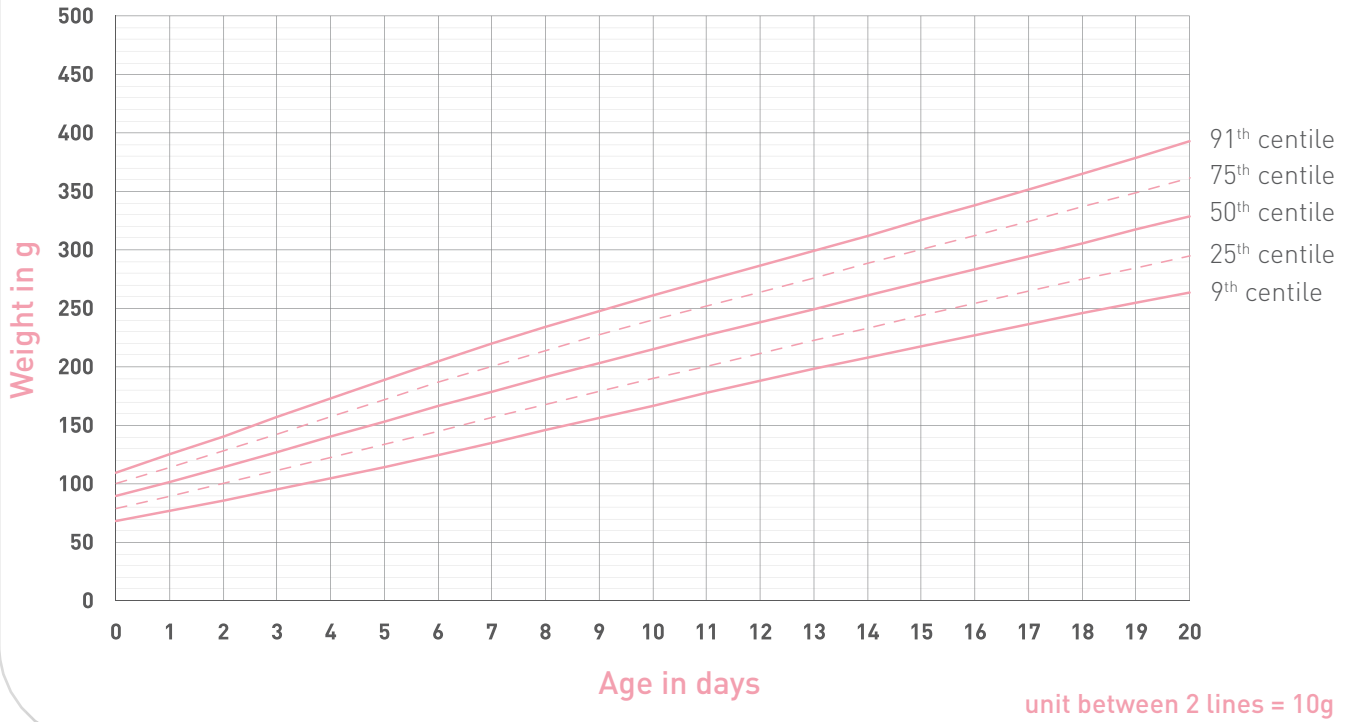
# KITTEN EARLY GROWTH CHART SPHYNX



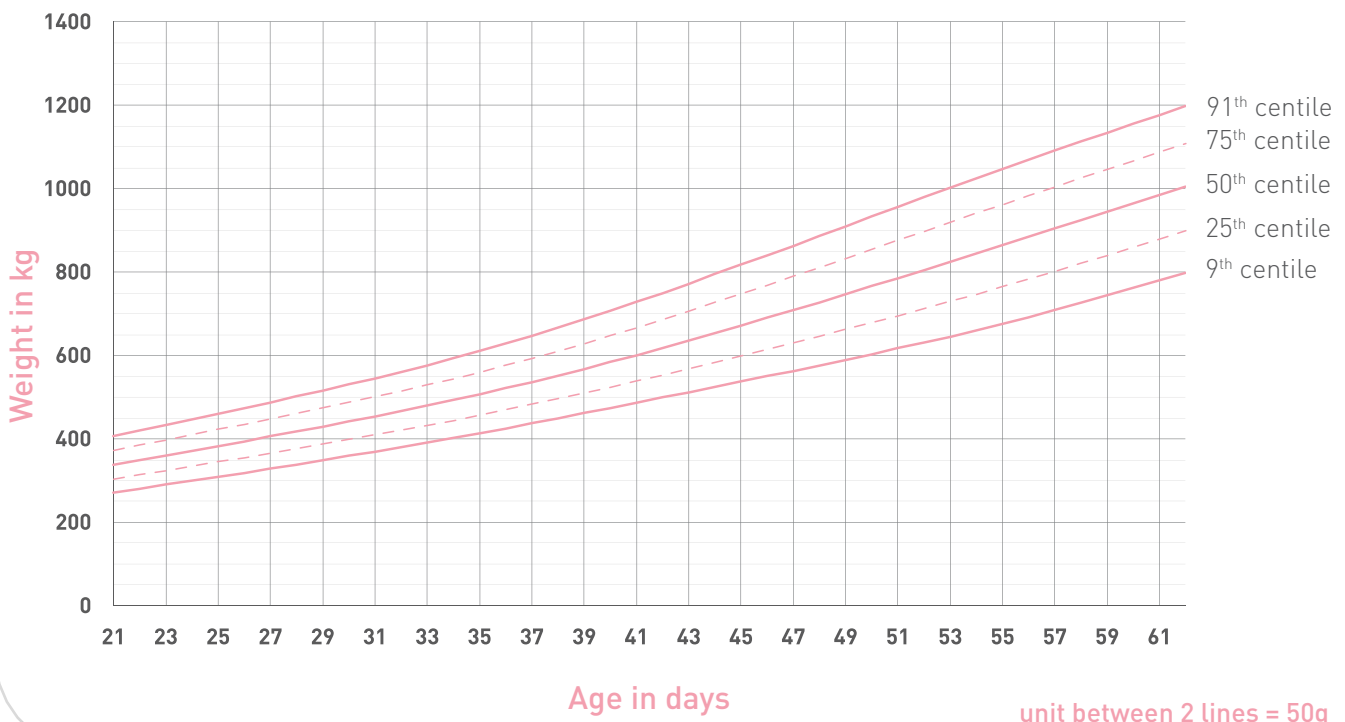
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





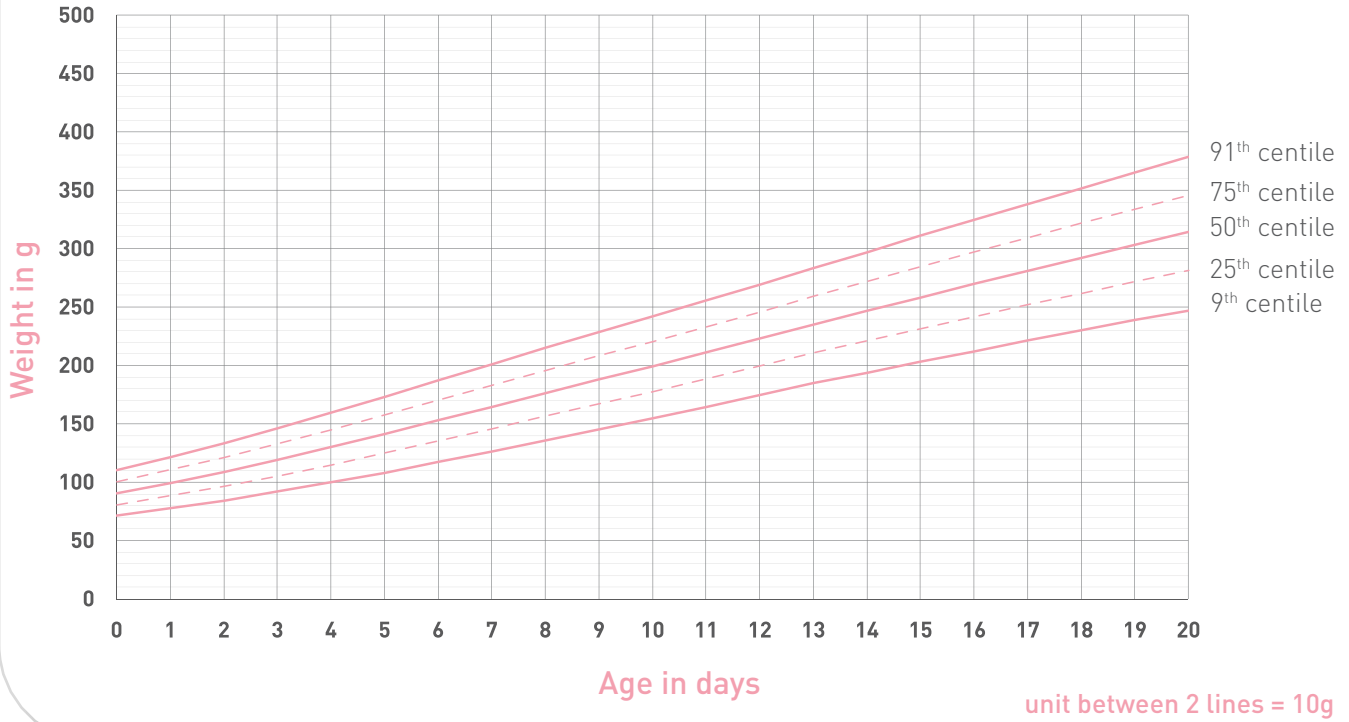
# KITTEN EARLY GROWTH CHART SIAMESE



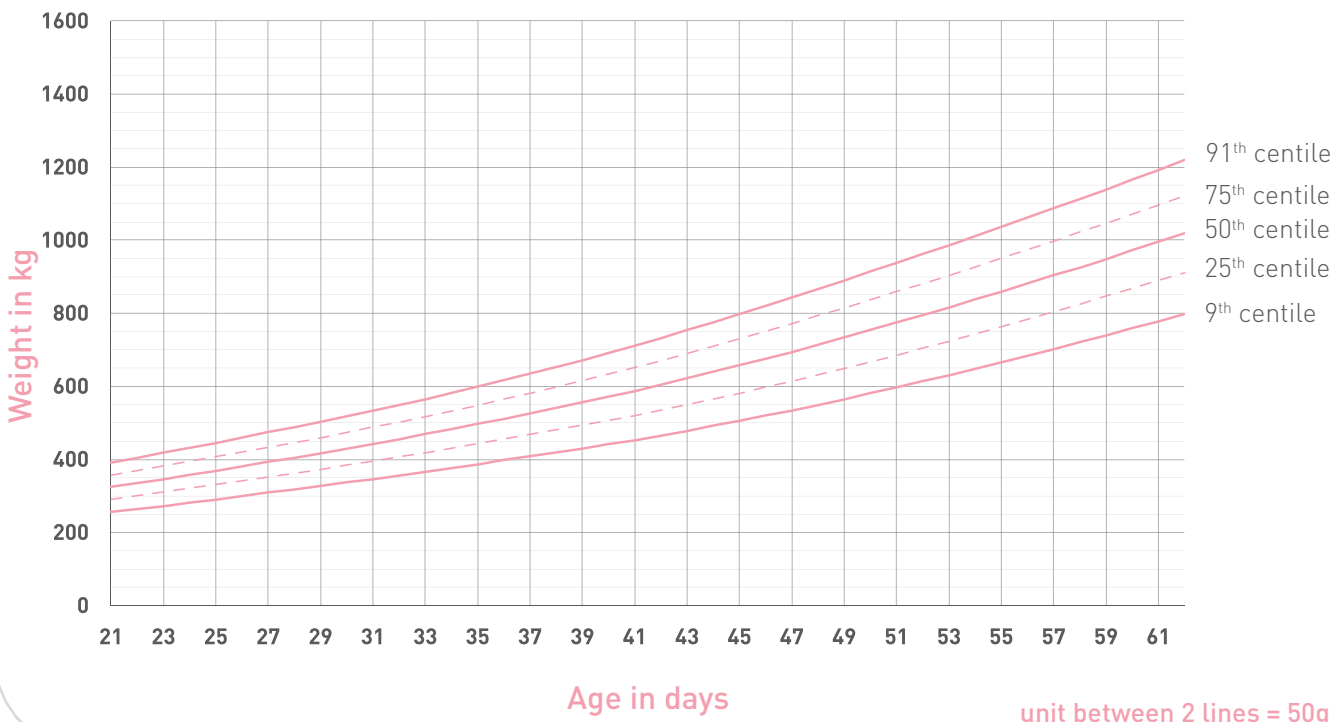
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





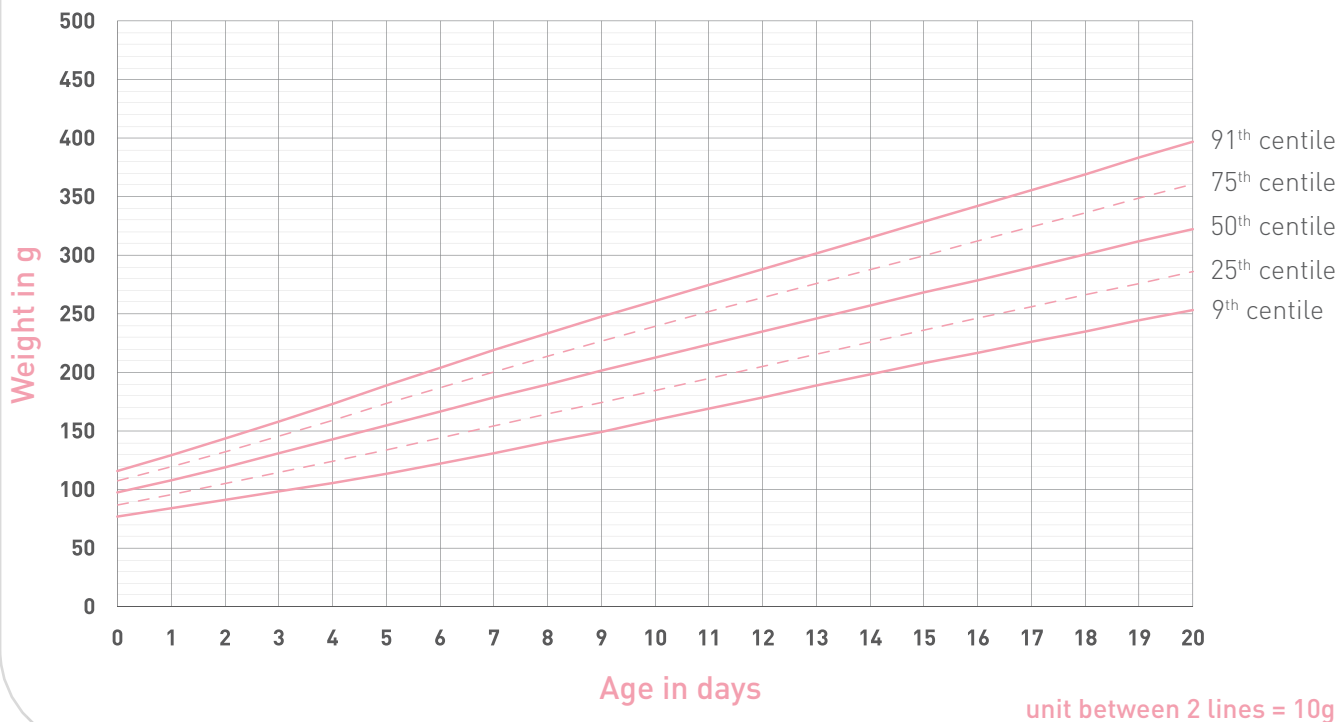
# KITTEN EARLY GROWTH CHART SIBERIAN FEMALE



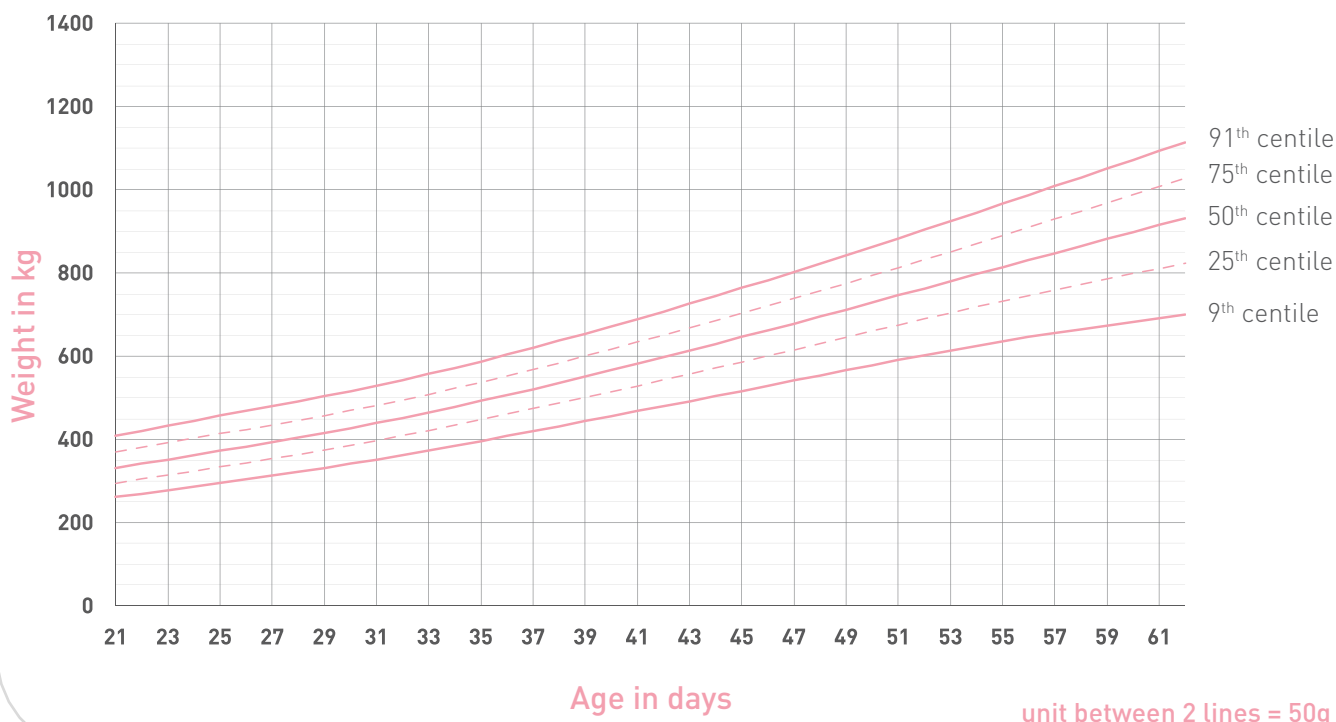
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





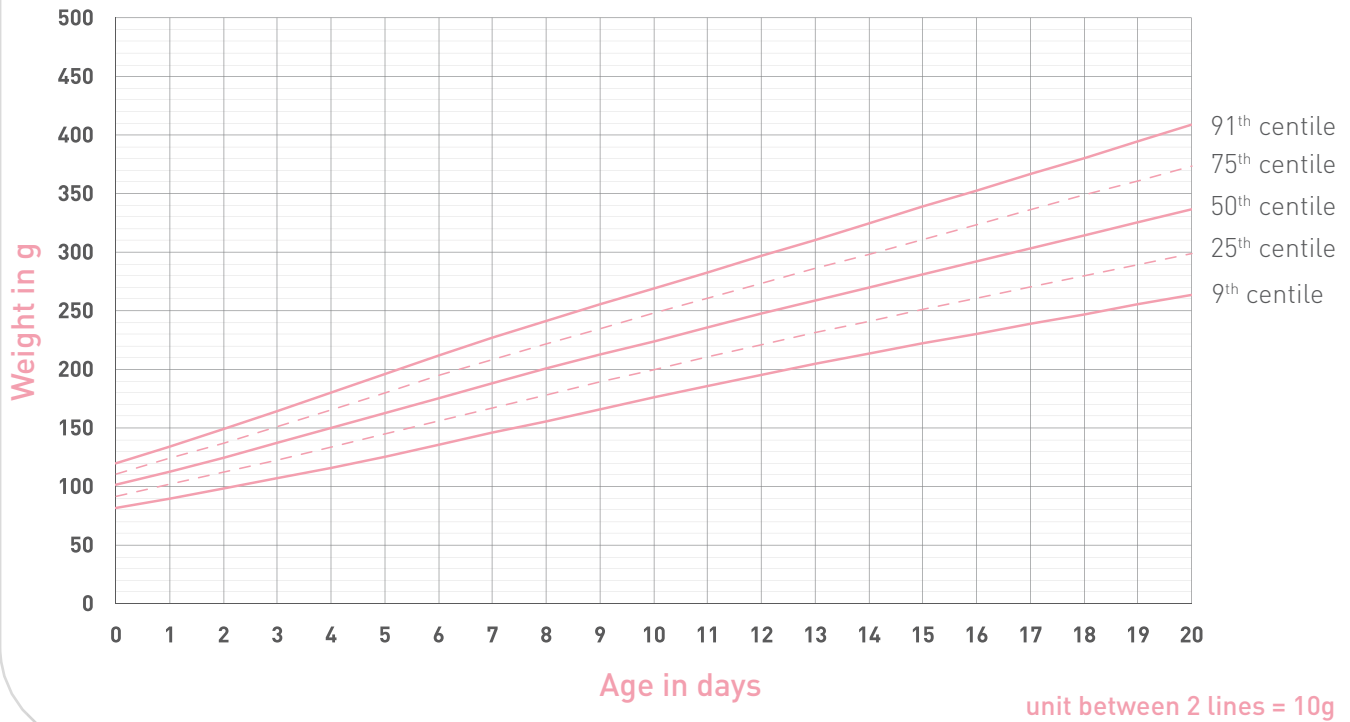
# KITTEN EARLY GROWTH CHART SIBERIAN MALE



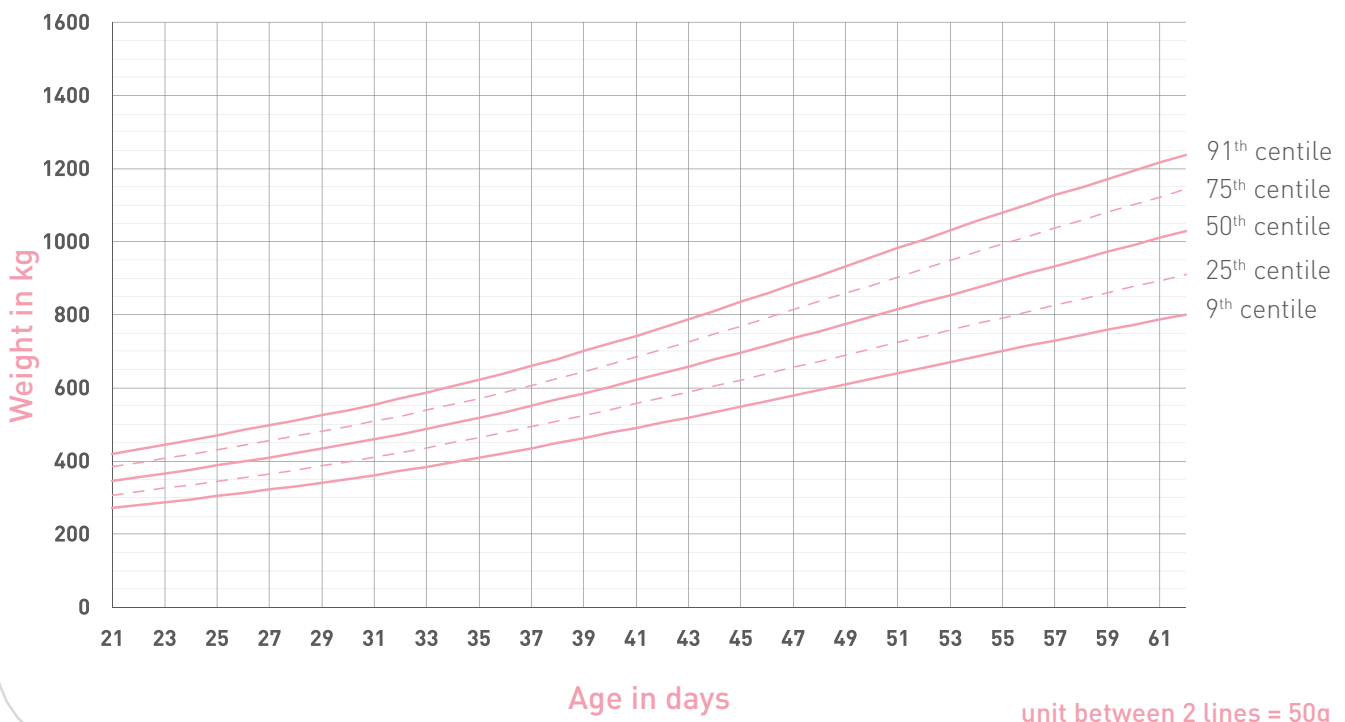
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





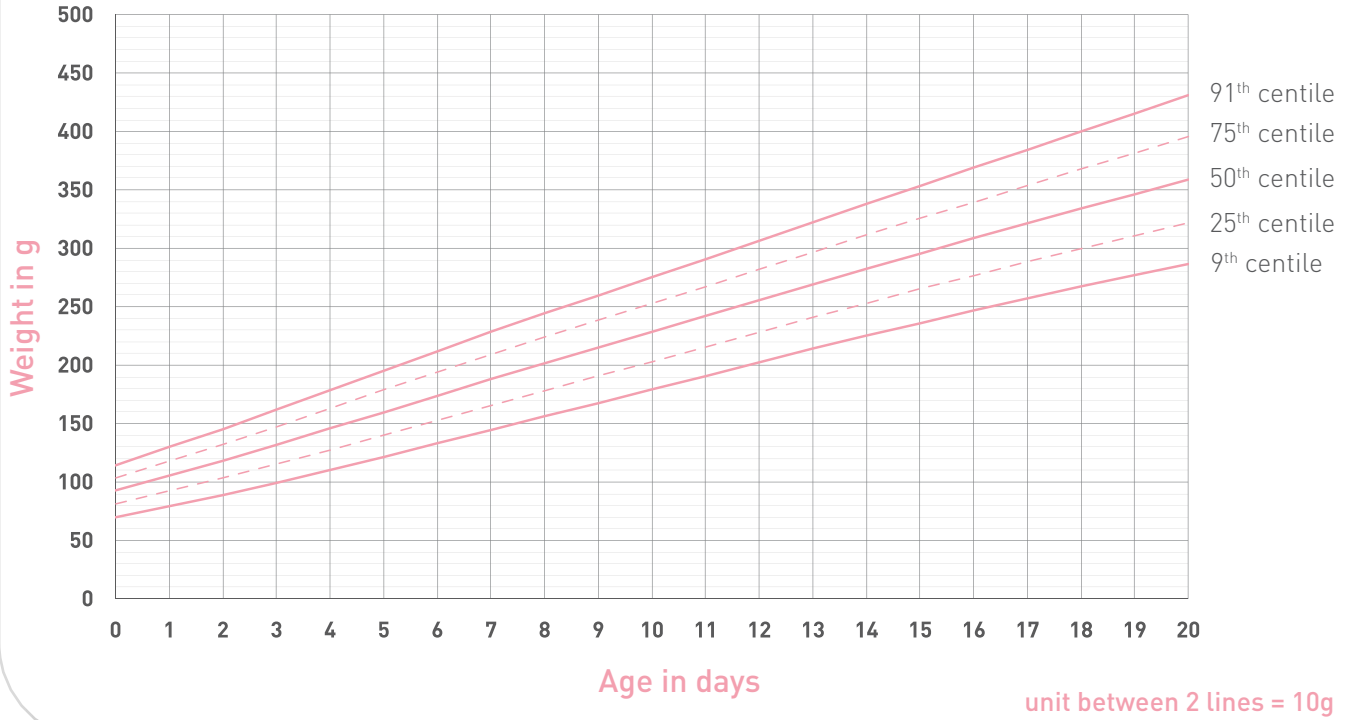
# KITTEN EARLY GROWTH CHART SOMALI



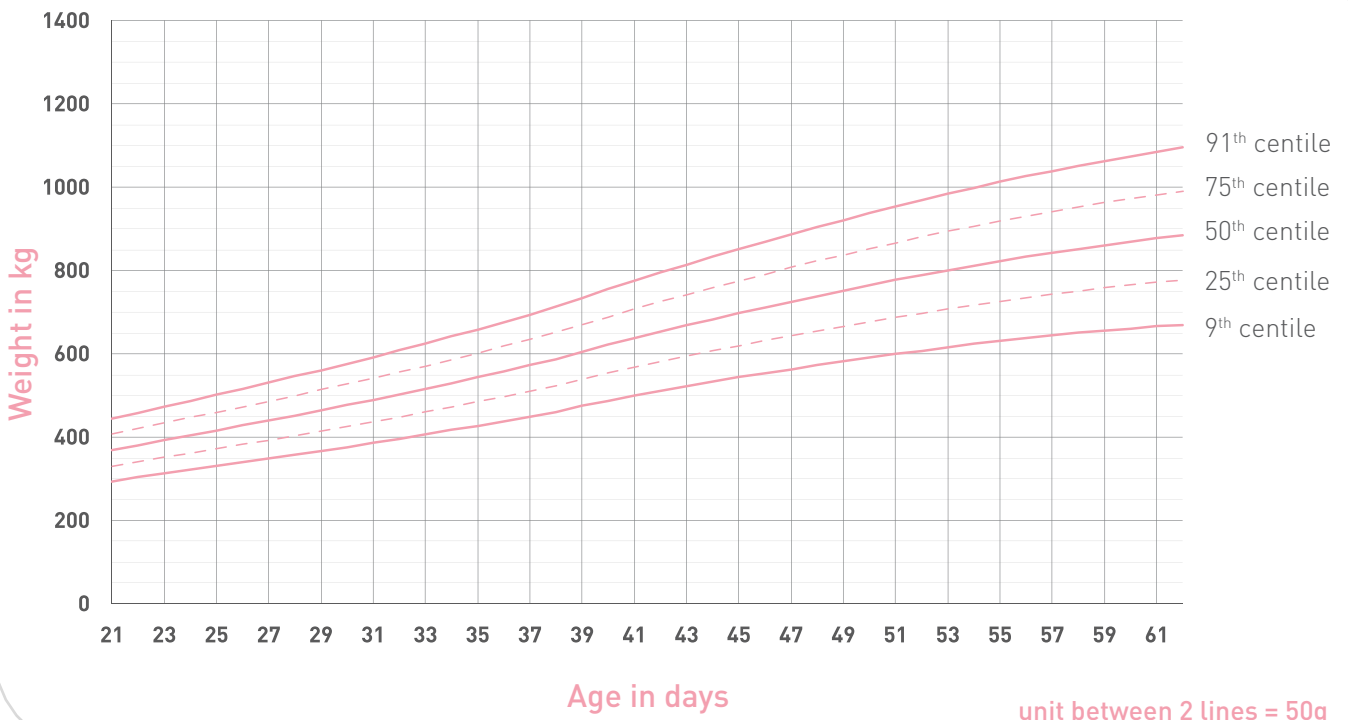
Kitten's name: ..... Date of birth : ..... / ..... / .....

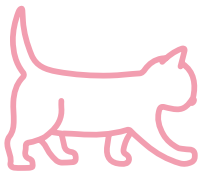
Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days





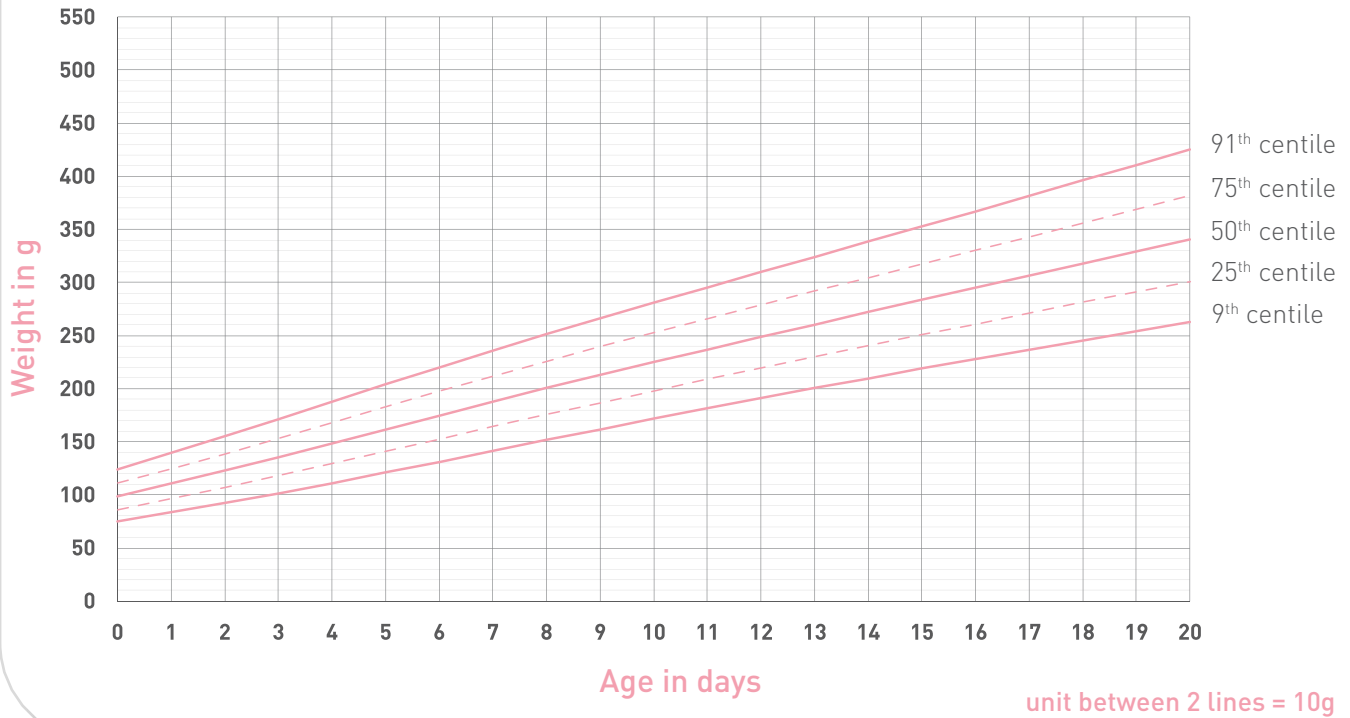
# KITTEN EARLY GROWTH CHART



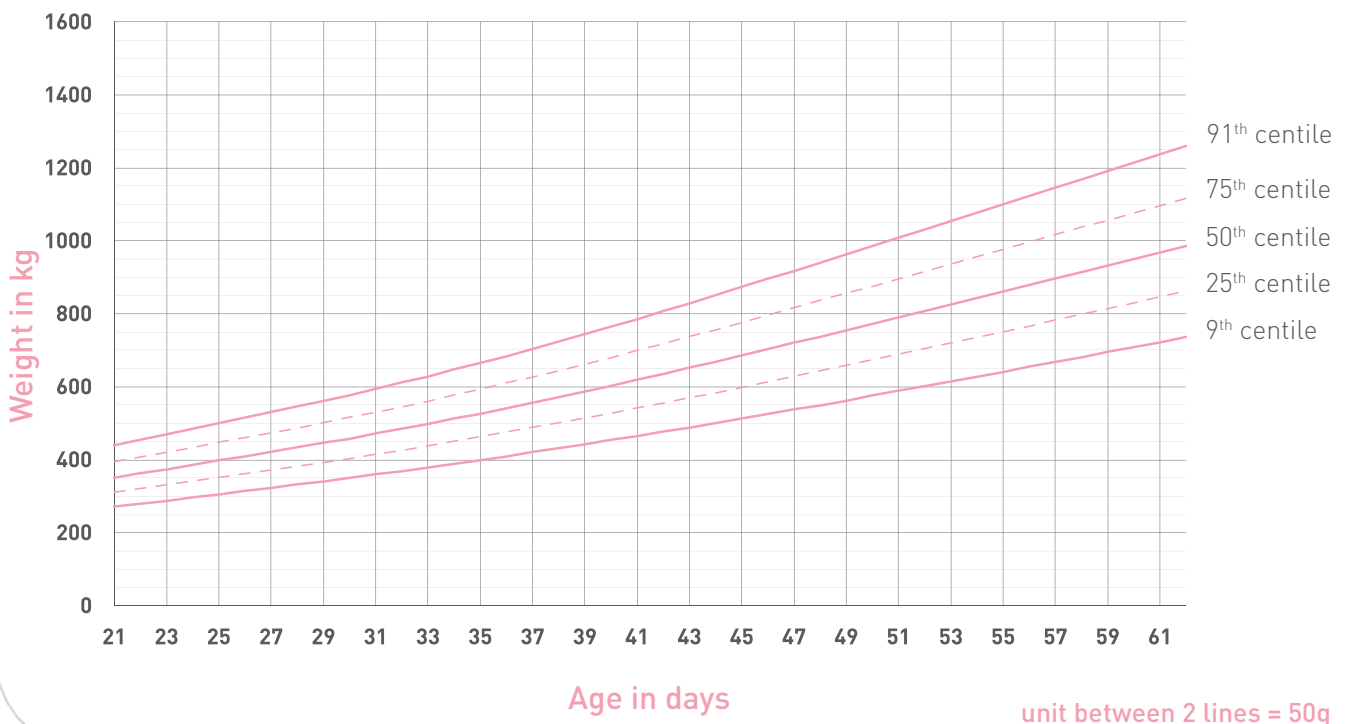
Kitten's name: ..... Date of birth : ..... / ..... / .....

Mother's name: ..... Father's name : .....

## 0-20 days



## 21-62 days



Around 2 months of age, the kitten will probably leave the breeding facility to join a new family where the growing phase will continue until the kitten reaches adult weight. During this period, the close follow-up of the body weight evolution must stay at the core of the regular health check.

In this perspective, you can give to the new pet owners the filled neonatal growth chart of the kitten, explaining your role following the weight gain of their kitten thanks to this tool. Then you can encourage the pet owners to continue the body weight follow-up of their kitten, providing them with the printed appropriate pediatric growth charts from 3 months of age up to adulthood (pages 6 to 46). You can advise the pet owners to share the growth charts with their veterinarian to follow the growth of their kitten together.

• **It is possible to use the online version: <https://www.waltham.com/resources/kitten-growth-charts>**

• **If you're looking for more details, please read the science behind these growth charts:**

Salt C, German AJ, Henzel KS, Butterwick RF. Growth standard charts for monitoring bodyweight in intact domestic shorthair kittens from the USA. PLoS One. 2022 Nov 21;17(11):e0277531. doi: 10.1371/journal.pone.0277531.

Salt C, Butterwick RF, Henzel KS, German AJ. Comparison of growth in neutered Domestic Shorthair kittens with growth in sexually-intact cats. PLoS One. 2023 Mar 15;18(3):e0283016. doi: 10.1371/journal.pone.0283016.

*These Growth Curves are not intended to be a diagnostic tool or predict the growth of any particular pet. Instead, this is a monitoring tool intended to assess the growth pattern of a given pet in comparison to the standard at the same age and sex category.*



## ♀ KITTEN GROWTH CHART



FEMALE

A series of measurements allows assessment of the kitten's growth. Please note that there is no ideal centile line, and growth can be considered normal provided that it tracks along the same centile line (or 'channels' in between two centile lines) over time.

- The 50th centile is not the goal for each kitten.
- Likewise, the 99.6th centile is not the goal for each kitten.
- Increases or decreases in growth beyond two centiles or a flat growth line (prior to reaching adult weight) are all signs of potential growth disturbances.**

- A growth rate that is too rapid resulting in a change in direction upwards across multiple centiles could indicate a risk of the kitten becoming overweight or obese.
- Slow growth resulting in a change in direction downwards across multiple centiles could be a sign of failure-to-thrive.

*If the kitten looks healthy and in ideal condition despite centiles being crossed in the same directions, it is possible the wrong chart was originally chosen. Try replotting the weights on the next chart, and reassess the growth pattern.*

Vet contact details:

Cat's Name:

Date of birth:

Neuter/Spay date:

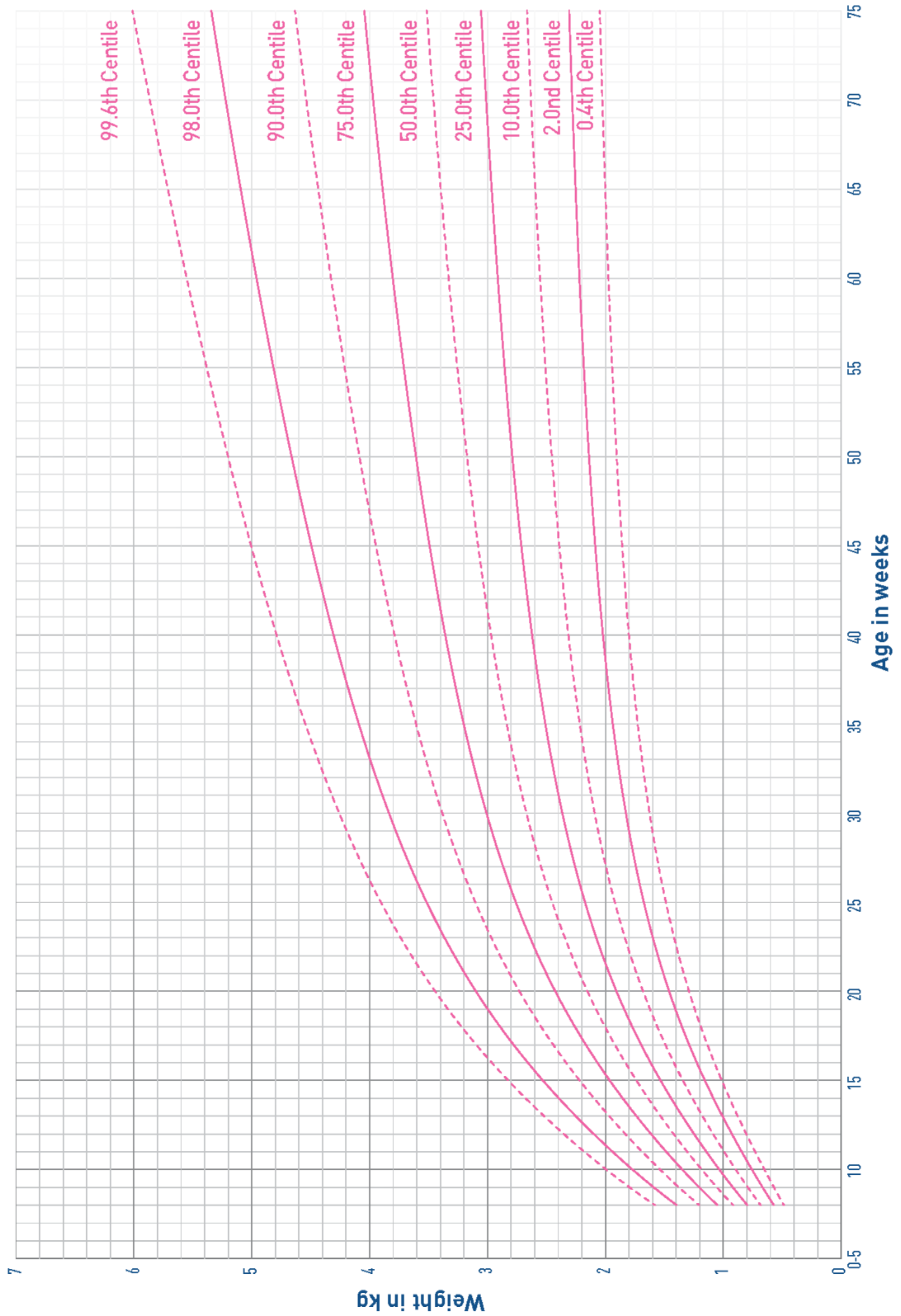
Date	Age (weeks)	Weight (kg)	Recorded by



# FEMALE KITTEN STANDARD PEDIATRIC GROWTH CURVE

## KITTEN GROWTH CHART

FEMALE





## KITTEN GROWTH CHART

MALE



A series of measurements allows assessment of the kitten's growth. Please note that there is no ideal centile line, and growth can be considered normal provided that it tracks along the same centile line (or 'channels' in between two centile lines) over time.

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*If the kitten looks healthy and in ideal condition despite centiles being crossed in the same directions, it is possible the wrong chart was originally chosen. Try replotting the weights on the next chart, and reassess the growth pattern.*

**Vet contact details:**

**Cat's Name:**

**Date of birth:**

**Neuter/Spay date:**

Date	Age (weeks)	Weight (kg)	Recorded by



## KITTEN GROWTH CHART

MALE

