One Grocery List, Three Math Activities

Three routes into math from one pretend grocery list: counting, spending, and finding the better buy. Pick the route that fits what your child can already do.

Our grocery list

3 apples · 2 pears · 4 potatoes · 1 loaf of bread · 1 gallon of milk · 1 canister of oats

Pretend store prices

Apples 50¢ each, or a bag of 10 for $4 · Pears $1 each · Potatoes $1 each · Bread $2 · Milk: half gallon $3, gallon $4 · Oats: small (10 oz) $2, large (20 oz) $3

Prices are made up for practice. Each child page repeats the prices it needs, so children don't have to flip back.

Choose a route

Route	Your child is ready if they can…	Your role	Print
A · Count & Sort Match one counter to each picture, count small groups, sort, and compare.	say the counting numbers to 5 or more. Matching each object to one number word is what this route practices, so it doesn't need to be secure yet.	Sit alongside. Read every prompt aloud, show the first row, then hand over.	Pages 3–4
B · Stay on Budget Add whole-dollar prices to a running total, then work out change from $10.	add single-digit numbers, with fingers or objects if needed, and count up to 10. The cents challenge also needs counting by 50s or 25s.	Nearby. Read prompts aloud if needed and check in after each step.	Start with page 5 Page 6: optional, later
C · Better Buy Compare package sizes; tell lower unit price, lower total cost, and best choice apart.	add and subtract money, double amounts, and recall multiplication facts. The advanced page also needs an understanding that fair price comparisons use equal amounts, and what "per one" means (per ounce, per pound). A calculator can help with the arithmetic, but using one doesn't by itself show readiness.	Talk it through. A calculator can help with arithmetic.	Start with page 7 Page 8: optional advanced challenge

Skills come first. As a rough reference only: Route A often fits ages 4–6, Route B ages 7–9, and Route C ages 9–11, with the advanced page often closer to ages 10–12. Children vary widely, and these are not ceilings. This is an activity, not a test or a placement tool.

You'll need: a pencil. For Route A, about 15 small counters, such as dry beans, buttons, blocks, or paper squares. Optional: real or play coins, and a calculator for Route C.

What to print: Route A: pages 3–4. Route B: start with page 5; page 6 is optional for later. Route C: start with page 7; page 8 is an optional advanced challenge. To save paper, read this guide on screen. The answer key is page 9.

Time: as a rough planning estimate that hasn't been tested with families, allow about 10–20 minutes per page. Shorter or longer sessions are fine, and so is stopping partway and finishing another day.

How to support each route

Show, share, then step back. Do the first example yourself while thinking out loud. Do the next one together. Then let your child lead, and help only when they ask or get stuck. Point out exactly what worked ("You touched each apple once") rather than just saying "good job." If a step is still hard after you've shown it, go back to objects or pictures.

Route A · Count & Sort (pages 3–4)

- **Read every prompt aloud.** Your child answers by pointing, saying, or placing counters. Writing is never required.
- **Page 3:** Show the apple row first. Touch each apple, place one counter on it, and count aloud. Then repeat the last number: "1, 2, 3 — three apples." Do the pears together, and let your child lead the potatoes.
- **Page 4:** For each food in the strip, your child says "fruit" or "vegetable," puts one counter in that basket, and crosses off the food. Crossing off shows which foods are done.
- **Without counters:** draw a dot on each picture on page 3. On page 4, draw a dot in the right basket, then cross off the food. Drawn dots stay put, so make new dots instead of trying to "move" old ones.
- **"Ready for more"** is optional. Use it if counting to 5 felt easy, and save it for another day if it didn't.

Route B · Stay on Budget (pages 5–6)

- Work through page 5 in order: one purchase, then a running total, then change. The basket total grows by one item at a time.
- The ten $1 bills on page 5 show how change works. Your child shades one bill for each dollar spent, and the unshaded bills are the change. Real or play money works too.
- Page 6 is a **cents challenge** for another day, once whole dollars feel easy. A number line shows counting up to make change.

Route C · Find the Better Buy (pages 7–8)

- Start with the word box on page 7. Use the oats picture to show that two small canisters hold the same amount as one large one.
- Question 4 has more than one sensible answer. Talking it through counts; a written explanation isn't needed.
- Page 8 is an **optional advanced challenge**. First check that your child understands comparing equal amounts (like the oats example) and what "per one" means: the price for one ounce or one pound. A calculator can help with the division, but being able to use one isn't a sign of readiness on its own.

One question to notice

When your child got stuck or wanted to check, what did they reach for first? Objects, a picture, fingers, counting on, the number line, a written method, or a guess they then tested? Their first move may offer a clue about what feels familiar right now; consider the help they needed. Use it to choose what to do next, not as a score.

About the age references. They follow a common sequence: counting and sorting in kindergarten, money word problems in grade 2, decimal division in grade 5, and unit pricing in grade 6 (Common Core State Standards K.CC, K.MD.3, 2.MD.8, 5.NBT.7, 6.RP.3b). They're reference points for sequence, not requirements or proof that any one child is ready.

Make it your own. Swap in foods your family buys, or use a store flyer or website. No trip is needed. Keep the three questions: How many? How much? Which is the better buy for us?

Count the food

1. Put one counter on each picture. Count out loud.

Apples

Start here together



How many? 1 2 3 4 5

Pears



How many? 1 2 3 4 5

Potatoes



How many? 1 2 3 4 5

2. Point to the number that tells **how many** in each row.

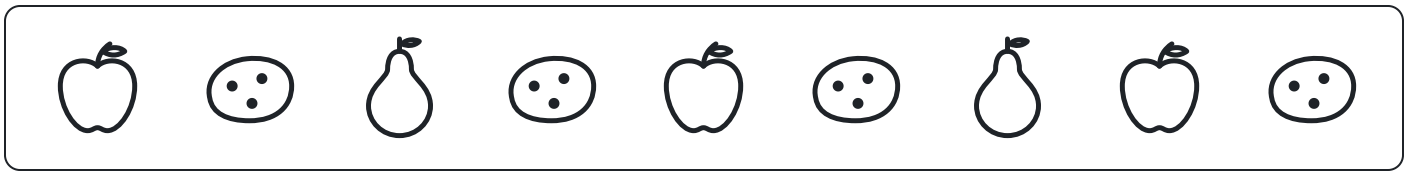
3. Point to the food we need the **most** of.

4. Point to the food we need the **fewest** of.

No counters? Draw a dot on each picture instead.

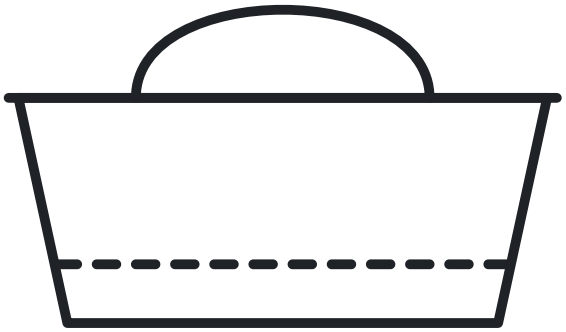
Sort into baskets

1. Point to each food. Say **fruit** or **vegetable**.

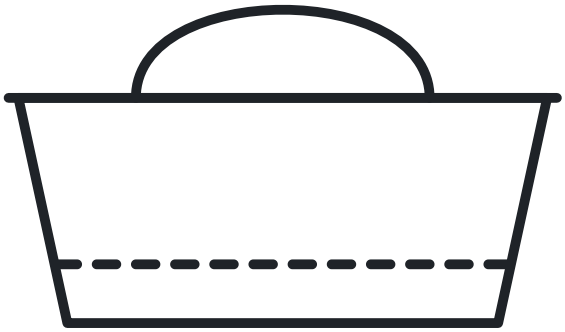


2. Put one counter in the right basket. Cross off the food.

Fruit
apples, pears



Vegetables
potatoes



3. Count each basket. Point to the number.

Fruit 1 2 3 4 5 6 Vegetables 1 2 3 4 5 6

4. Which basket has **more**? Point to it.

Drawing instead? Draw one dot in the right basket for each food, then cross off the food.

Ready for more? (optional)

- Count **all** the food in both baskets.
- How many **more** fruit than vegetables?
- How many more counters would make **10** in the fruit basket?
- Pretend the list says **7 apples**. Count out 7 counters.

Fill the basket: whole dollars

				
Pear	Potato	Bread	Gallon of milk	Small oats
$1 each	**$1 each**	**$2**	**$4**	**$2**

Example: 2 pears

$1 **$1** $1 + $1 = **$2**

The basket total is $2.

1. Add a loaf of bread ($2). $2 + $2 = _____

2. Add a gallon of milk ($4). New basket total: _____

3. You pay with $10. Shade one $1 bill for each dollar you spent.

$1 **$1** **$1** **$1** **$1** **$1** **$1** **$1** **$1** **$1**

How many bills are **not** shaded? That is your change: _____

4. Spend your change! Pick something from the shelf that costs that much or less.

Draw it or write it:

Challenge: cents

Try this page when whole dollars feel easy.

 Apple	 Pear	 Potato	 Bread	 Gallon of milk	 Small oats
50¢ each	**$1 each**	**$1 each**	**$2**	**$4**	**$2**

Example: 2 apples



50¢ + 50¢ = 100¢. 100¢ is the same as **$1.00**.

1. 3 apples cost: _____ Count by 50s: 50¢, $1.00, …

2. 3 apples and 1 pear cost: _____

3. You pay with $5.00. Count up from $2.50 to $5.00 on the number line.



Your change: _____

Big challenge: the whole list (optional)

3 apples	your answer from question 1
2 pears	$1 each
4 potatoes	$1 each
1 loaf of bread	$2
1 gallon of milk	$4
1 small oats	$2

Whole list total: _____ Change from $20: _____

Which is the better buy?

Unit price	**Total cost**	**Best choice for us**
the price for *one* unit: one apple, one ounce, one half gallon	what you actually pay for what you buy	depends on what we need, can store, and can spend

Example: Oats



2 small: 10 oz + 10 oz = **20 oz**
$2 + $2 = **$4**

same amount



1 large: **20 oz**
$3

Same amount of oats, but the large canister costs **$1 less**. It has the lower unit price.

1 **Milk.** Half gallon $3 · gallon $4. A gallon holds 2 half gallons.

2 half gallons cost: ☐

Less for the same milk: **1 gallon** / **2 half gallons**

2 **Apples.** 50¢ each, or a bag of 10 for $4.

10 loose apples cost: ☐

Lower unit price: **loose** / **bag**

3 **Our list needs only 3 apples.**

3 loose apples cost: ☐

Lower total cost for 3 apples: **loose** / **bag**

4 **Best choice for us.** Circle one for each family. Tell someone why.

Family 1 eats 10 apples every week.	**loose / bag**
Family 2 needs 3 apples and has $2 left to spend.	**loose / bag**

Work space · a calculator is fine for checking

Advanced: price per ounce or pound

Try this page when you know what "per ounce" means: the price for *one* ounce. A calculator can help with the dividing.

> **Example: a 6-ounce box of raisins costs $1.50**
> Unit price = price ÷ ounces. $1.50 ÷ 6 = **$0.25 per ounce**.
> Check: 6 × 25¢ = 150¢ = $1.50.

1 **Raisins.** A 20-ounce bag costs $4.00. Price per ounce: _____

Lower unit price: box / bag How much less per ounce? _____

Work space

2 **Rice.** Find the price per pound.

2-pound bag: $3.00
Per pound: _____

5-pound bag: $6.50
Per pound: _____

3 Suppose 5 pounds cost the same per pound as the 2-pound bag.

5 pounds would cost: _____

How much does the 5-pound bag save? _____

4 A family needs only 2 pounds of rice this month and has $5 to spend.

Which bag has the lower **total cost**?	**2-pound / 5-pound**
Which has the lower **unit price**?	**2-pound / 5-pound**
Which is the **best choice** for this family? Tell someone why.	**2-pound / 5-pound**

FOR THE GROWN-UP

Answer key

Any clear method counts, including pointing, saying the answer, or using objects. The explanations show one way to think about each answer.

A · Count the food (page 3)

1. One counter on each picture: 3 apples, 2 pears, 4 potatoes.
2. Apples **3**, pears **2**, potatoes **4**.
3. Most: **potatoes** (4).
4. Fewest: **pears** (2).

A · Sort into baskets (page 4)

1. Apples and pears are fruit; potatoes are vegetables.
2. Fruit basket: 5 counters. Vegetable basket: 4 counters.
3. Fruit **5** (3 apples + 2 pears). Vegetables **4**.
4. **Fruit** (5 is more than 4).

Ready for more: 9 in all · **1** more fruit · **5** more to make 10 · a group of 7 counters.

B · Whole dollars (page 5)

1. $2 + $2 = **$4**.
2. $4 + $4 = **$8**.
3. 8 bills shaded; **2** not shaded. Change: **$2** ($8 + $2 = $10).
4. Any choice costing $2 or less: bread, small oats, 1 or 2 pears, 1 or 2 potatoes, or 1 pear and 1 potato.

B · Cents challenge (page 6)

1. 50¢ + 50¢ + 50¢ = 150¢ = **$1.50**.
2. $1.50 + $1.00 = **$2.50**.
3. From $2.50 to $5.00 is five 50¢ jumps: **$2.50** change.

Big challenge: $1.50 + $2 + $4 + $2 + $4 + $2 = **$15.50**. Change from $20: **$4.50**.

C · Better buy (page 7)

1. $3 + $3 = **$6**. The **gallon** costs less for the same milk ($4 vs. $6, so $2 less).
2. 10 × 50¢ = **$5**. Lower unit price: **bag** (10 apples for $4 instead of $5, which is 40¢ each instead of 50¢).
3. 3 × 50¢ = **$1.50**. Lower total cost for 3 apples: **loose** ($1.50 vs. $4).
4. Family 1: **bag**, since they'll use all 10 and pay less per apple. Family 2: **loose**, since the bag costs $4 and they have $2. Other reasons are fine if they make sense.

C · Advanced (page 8)

1. $4.00 ÷ 20 = **$0.20** per ounce. Lower unit price: **bag**, **5¢** less per ounce ($0.25 − $0.20).
2. 2-pound: $3.00 ÷ 2 = **$1.50** per pound. 5-pound: $6.50 ÷ 5 = **$1.30** per pound.
3. 5 × $1.50 = **$7.50**. The 5-pound bag saves **$1.00** ($7.50 − $6.50).
4. Lower total cost: **2-pound** ($3.00). Lower unit price: **5-pound** ($1.30 per pound). Best choice: **2-pound**, because they only need 2 pounds and $6.50 is more than their $5.

Three different ideas

A **lower unit price** means less money for the same amount. A **lower total cost** means less money at the register. The **best choice** also depends on what the family needs, can store, and can spend. These can point to different packages.