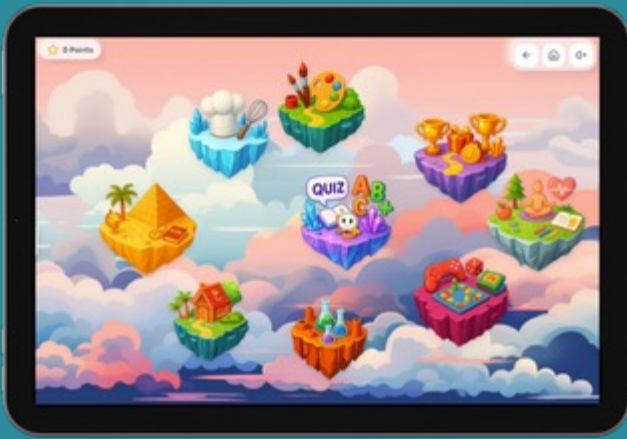


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Problem Solving with Money - Year 4

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SMART MONEY STRATEGY MAP

1

1. ESTIMATE

Round prices to predict the total.



2

2. CALCULATE

Work out the exact amount



3

3. COMPARE

Is the exact answer close to your estimate?



4

4. ADJUST

Change the plan if it is over budget.



5

5. CHECK

Explain why your answer makes sense.



WORKED EXAMPLE

$$\$18.70 + \$22.40 + \$9.60$$

Estimate:

$$\$19 + \$22 + \$10 = \$51$$

Exact total:

$$\$50.70$$

Check:

$$\$50.70 \text{ is close to } \$51.$$

ESTIMATE • CALCULATE • CHECK

1. LOWER BOUND



Round each price down to the whole dollar.

2. UPPER BOUND



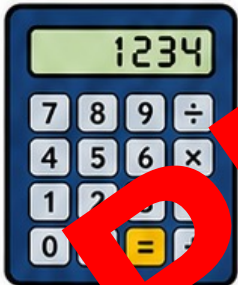
Round each price up to the whole dollar.

3. NEAREST ESTIMATE



Round to the nearest whole dollar.

4. CALCULATE EXACTLY



Use place value, written working or compensation.

5. COMPARE



The exact answer should be close to your estimate.

6. CHECK



Does the answer fit the budget and the question?

EXAMPLE A

$$4 \times \$6.40$$

Bounds: \$24 to \$28

Exact: \$25.60

EXAMPLE B

$$\begin{aligned} & 3 \times \$68 \\ &= 3 \times \$70 - \$6 \\ &= \$204 \end{aligned}$$



ESTIMATE THE TOTAL

Name: _____

Date: _____

Estimate first. Then calculate exactly and check that your answer makes sense.

1. Four tickets cost \$6.40 each. Write a lower estimate, an upper estimate and the exact total.

Lower	Upper	Exact
_____	_____	_____
_____	_____	_____
_____	_____	_____

2. Three books cost \$7.85 each. Write a lower estimate, an upper estimate and the exact total.

Lower	Upper	Exact
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Estimate $\$8.60 + \$12.30 + \$5.75$ by rounding to the nearest dollar. Then find the exact total.

Estimate	Exact
_____	_____
_____	_____
_____	_____

4. A notebook costs \$4.00 and markers cost \$12.50. Is \$25 enough? Show an estimate and the exact total.

Estimate	Exact	Yes or No
_____	_____	_____
_____	_____	_____
_____	_____	_____

5. True or false? Five snacks at \$3.40 each cost between \$15 and \$20. Prove it.

6. Why is an upper estimate useful when you must stay under a budget?





ESTIMATE THE TOTAL

ANSWERS

Date: _____

Estimate first. Then calculate exactly and check that your answer makes sense.

1. Four tickets cost \$6.40 each. Write a lower estimate, an upper estimate and the exact total.

Lower	Upper	Exact
_____ \$24 _____	_____ \$28 _____	_____ \$25.60 _____
_____	_____	_____
_____	_____	_____

2. Three books cost \$7.85 each. Write a lower estimate, an upper estimate and the exact total.

Lower	Upper	Exact
_____ \$21 _____	_____ \$24 _____	_____ \$23.55 _____
_____	_____	_____
_____	_____	_____

3. Estimate $\$8.60 + \$12.30 + \$5.75$ by rounding to the nearest dollar. Then find the exact total.

Estimate	Exact
_____ \$27 _____	_____ \$26.65 _____
_____	_____
_____	_____

4. A notebook costs \$9.00 and markers cost \$12.50. Is \$25 enough? Show an estimate and the exact total.

Estimate	Exact	Yes or No
_____ \$23 _____	_____ \$22.30 _____	_____ Yes _____
_____	_____	_____
_____	_____	_____

5. True or false? Five snacks at \$3.40 each cost between \$15 and \$20. Prove it.

True; bounds \$15 to \$20; exact \$17.00.

6. Why is an upper estimate useful when you must stay under a budget?

An upper estimate gives a safe maximum, so it helps prevent overspending.



ROUND AND ADJUST

Name: _____

Date: _____

Round to a friendly number, calculate, then adjust to find the exact amount.

① $3 \times \$68$

Rounded calculation

Adjustment

Exact answer

② $4 \times \$84$

Rounded calculation

Adjustment

Exact answer

③ $5 \times \$56$

Rounded calculation

Adjustment

Exact answer

④ $6 \times \$29$

Rounded calculation

Adjustment

Exact answer

⑤ $8 \times \$47$

Rounded calculation

Adjustment

Exact answer

⑥ Choose one calculation. Explain why your adjustment works.

If you round up, subtract the extra.
If you round down, add the missing amount.

ROUND AND ADJUST

ANSWERS

Date: _____

Round to a friendly number, calculate, then adjust to find the exact amount.

① $3 \times \$68$

Rounded calculation

$$3 \times \$70 = \$210$$

Adjustment

$$-\$6$$

Exact answer

$$\$204$$

② $4 \times \$84$

Rounded calculation

$$4 \times \$80 = \$320$$

Adjustment

$$+\$16$$

Exact answer

$$\$336$$

③ $5 \times \$56$

Rounded calculation

$$5 \times \$60 = \$300$$

Adjustment

$$-\$20$$

Exact answer

$$\$280$$

④ $6 \times \$29$

Rounded calculation

$$6 \times \$30 = \$180$$

Adjustment

$$-\$6$$

Exact answer

$$\$174$$

⑤ $8 \times \$47$

Rounded calculation

$$8 \times \$50 = \$400$$

Adjustment

$$-\$24$$

Exact answer

$$\$376$$

⑥ Choose one calculation. Explain why your adjustment works.

For $3 \times \$68$, each price is \$2 below \$70,
so subtract $3 \times \$2 = \$6$.

If you round up, subtract the extra.
If you round down, add the missing amount.



BUDGET AND CHANGE

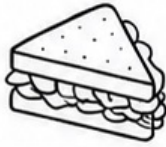


Name: _____

Date: _____



Fruit cup
\$3.20



Sandwich
\$6.80



Juice
\$2.50



Muffin
\$4.40

Estimate first. Then calculate the exact total and change.

- 1 Buy one sandwich and one juice. Estimate the total, find the exact total, then find the change from \$15.

Estimate

Exact total

Change from \$15

\$ _____

- 2 Buy three fruit cups. Estimate the total, find the exact total, then find the change from \$12.

Estimate

Exact total

Change from \$12

\$ _____

- 3 Is \$20 enough for two sandwiches and two juices? Show an estimate, the exact total, and the change.

Estimate

Exact total

Change from \$20

\$ _____

- 4 Buy one of every menu item. Find the exact total and the change from \$20.

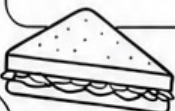
Exact total

Change from \$20

\$ _____

- 5 Choose one answer. Explain how your estimate helped you check it.







BUDGET AND CHANGE

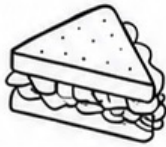


ANSWERS

Date: _____



Fruit cup
\$3.20



Sandwich
\$6.80



Juice
\$2.50



Muffin
\$4.40

Estimate first. Then calculate the exact total and change.

- 1 Buy one sandwich and one juice. Estimate the total, find the exact total, then find the change from \$15.

Estimate

\$10

Exact total

\$9.30

Change from \$15

\$ 5.70

- 2 Buy three fruit cups. Estimate the total, find the exact total, then find the change from \$12.

Estimate

\$9

Exact total

\$9.60

Change from \$12

\$ 2.40

- 3 Is \$20 enough for one sandwich and two juices? Show an estimate, the exact total, and the change.

Estimate

Yes \$20

Exact total

\$18.60

Change from \$20

\$ 1.40

- 4 Buy one of every menu item. Find the exact total and the change from \$20.

Exact total

\$16.90

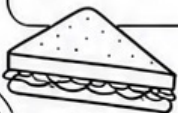
Change from \$20

\$ 3.10

- 5 Choose one answer. Explain how your estimate helped you check it.



- The exact total was close to my estimate, _____
- so the calculation is reasonable. _____



CLASS MARKET BUDGET

Name: _____

BUDGET: \$120.00

Date: _____

Your plan must include a display board, a table cover, a float box,
at least one marker pack and two packs of paper bags.
Optional: decorations and stickers.

SUPPLIES	PRICE
Display board	\$18.40
Paper bags (1 pack)	\$7.25
Marker pack	\$12.60
Decorations	\$1.75
Table cover	\$6.80
Float box	\$10.00
Stickers	\$8.00

1. Estimate the required-cost total.

2. Choose quantities and optional items.

Item	Quantity	Cost

3. Calculate the exact total.

4. Find the money left.

5. Is your plan within budget? Show a check.

6. Justify one spending choice.

CLASS MARKET BUDGET

ANSWERS

BUDGET: \$120.00

Date: _____

Your plan must include a display board, a table cover, a float box, at least one marker pack and two packs of paper bags.
Optional: decorations and stickers.

SUPPLIES	PRICE
Display board	\$18.40
Paper bags (1 pack)	\$7.25
Marker pack	\$12.60
Decorations	\$9.75
Table cover	\$16.80
Float box	\$21.50
Stickers	\$8.90

1. Estimate the required-cost total.

\$99.95

2. Choose quantities and optional items.

Item	Quantity	Cost
Display board	1	\$18.40
Paper bags	2	\$14.50
Marker pack	1	\$12.60
Decorations	1	\$9.75
Table cover	1	\$16.80
Float box	1	\$21.50
Stickers	1	\$8.90

3. Calculate the exact total.

\$102.45

4. Find the money left.

\$17.55

5. Is your plan within budget? Show a check.

Yes;
 $\$102.45 + \$17.55 = \$120.00$

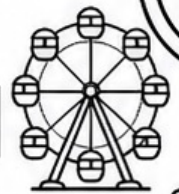
6. Justify one spending choice.

Stickers help label prices, and the plan remains under budget.

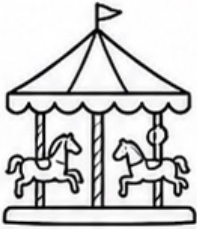




ADVENTURE DAY PLANNER – PLAN



Name: _____ Date: _____



BUDGET: \$100.00



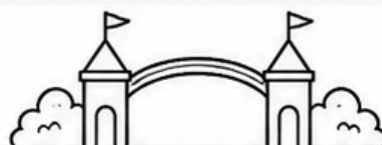
Item	Price
Entry	\$18.50
Roller coaster	\$9.80
Water ride	\$7.60
Arcade	\$4.25
Lunch	\$12.40
Drink	\$3.50
Ice cream	\$4.80
Photo	\$8.90
Souvenir cap	\$14.75

Include entry, choose at least three activities, and choose at least one food or drink item. Photo or souvenir is optional.

Choose	Item	Quantity	Rounded estimate
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			

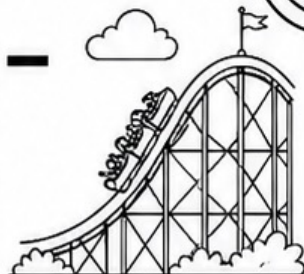
My estimated total: _____

Why should this plan fit the budget? _____





ADVENTURE DAY PLANNER – CALCULATE AND CHECK



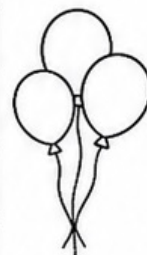
Name: _____

Date: _____

Use the choices from your Plan page.



Item	Quantity	Exact cost



Exact total: _____



Money left from \$10 _____



Compare with your estimate. Difference: _____



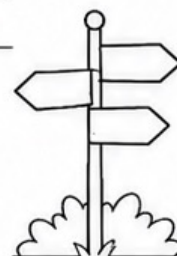
My safety buffer is: _____

1. Did your plan meet all the rules?



2. If the plan is over budget, what will you change?

3. Explain one check that proves your total is reasonable.





ADVENTURE DAY PLANNER – PLAN



ANSWERS

Date: _____



BUDGET: \$100.00



Item	Price
Entry	\$18.50
Roller coaster	\$9.80
Water ride	\$7.60
Arcade	\$6.25
Lunch	\$12.40
Drink	\$3.50
Ice cream	\$4.80
Photo	\$8.90
Souvenir cap	\$14.75

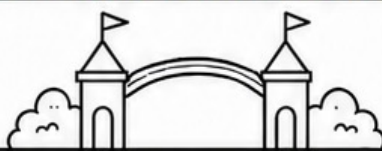
Include entry, choose at least three activities, and choose at least one food or drink item. Photo and souvenir is optional.

Choose	Item	Quantity	Rounded estimate
☒	Entry	1	\$19
☒	Roller coaster	1	\$10
☒	Water ride	1	\$8
☒	Arcade	1	\$6
☒	Lunch	1	\$12
☒	Drink	1	\$4
☐	Ice cream		
☒	Photo	1	\$9
☐	Souvenir cap		

My estimated total: \$68

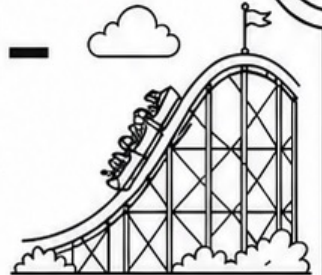
Why should this plan fit the budget? _____

My nearest-dollar estimate is well below \$100, leaving a safe buffer.





ADVENTURE DAY PLANNER – CALCULATE AND CHECK



ANSWERS

Date: _____

Use the choices from your Plan page.



Item	Quantity	Exact cost
Entry	1	\$18.50
Roller coaster	1	\$9.80
Water ride	1	\$7.60
Arcade	1	\$6.55
Lunch	1	\$8.50
Drink	1	\$3.50
Photo	1	\$8.90



Exact total: \$66.95



Money left from \$100: \$33.05



Compare with your estimate. Difference: \$1.05



My safety buffer is: \$33.05

1. Did your plan meet all the rules?

Yes — entry, three activities and food or drink are included.

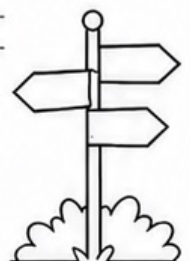


2. If the plan is over budget, what will you change?

No change is needed because the plan is under budget.

3. Explain one check that proves your total is reasonable.

The exact \$66.95 is close to my \$68 estimate.



MONEY MATCH-UP

INSTRUCTIONS

- ★ **Players:** 2–4. You need: one counter each, one die, the Item Cards, Challenge Cards and Check Key.
- ★ **Set up:** Place the numbered Item Cards face up. Shuffle the Challenge Cards.
- ★ **On your turn:** Draw one Challenge Card. Find the Item Card with the same number. Solve the money problem. Check the key. Correct? Roll and move. Not yet? Stay and explain a new strategy.
- ★ **Win:** The first player to reach FINISH wins.



MONEY MATCH-UP — ITEM CARDS

1

Notebook

\$9.80



2

Marker pack

\$12.50



3

Art pad

\$7.60



4

Ruler

\$3.40



5

Glue sticks

\$6.75



6

Lunch box

\$14.20



7

Drink bottle

\$11.90



8

Storybook

\$8.85



9

Puzzle

\$15.60



10

Sports ball

\$18.40



11

Headphones

\$24.75



12

Backpack

\$29.50



MONEY MATCH-UP — CHALLENGE CARDS

1 Round the price to the nearest dollar.

2 Find the exact cost of 2.

3 Find lower and upper bounds for 3, then exact.

4 Find change from \$10.

5 Find an upper estimate and exact cost for 1.

6 Find the exact cost of 3.

7 Is \$25 enough for 2? Find change.

8 Nearest-dollar estimate and exact cost for 4.

9 Find change from \$20.

10 Nearest-dollar estimate and exact cost for 2.

11 Find lower and upper bounds for 2, then exact.

12 Add the backpack price and notebook price.

≡ CHECK KEY ≡

1 \$10 | 2 \$25.00 | 3 \$21–\$24; \$22.80 | 4 \$6.60 | 5 \$28; \$27.00 |
 6 \$42.60 | 7 Yes; \$1.20 | 8 \$36; \$35.40 | 9 \$4.40 | 10 \$36; \$36.80 |
 11 \$48–\$50; \$49.50 | 12 \$39.30

BUDGET TRAIL



Players: 2–4.

You need: one counter each, one die, the Market Menu, Task Cards and one Player Record each.



Start with a \$60 budget.



On your turn: Roll and move along the trail. On a STAR, draw a Task Card, estimate, calculate and record the cost. Check the key. If correct, update your balance. If your balance would go below \$0, adjust your plan.



Win: Reach FINISH with a complete record and a balance of \$0 or more.



BUDGET TRAIL — MARKET MENU & TASK CARDS



PICNIC

Sandwich	\$6.80
Fruit cup	\$3.20
Juice	\$2.50



ART

Sketchbook	\$9.80
Markers	\$12.50
Brush	\$4.60



GAMES

Puzzle	\$15.60
Sports ball	\$3.40
Card game	\$7.25



GARDEN

Seed packet	\$3.75
Gloves	\$8.90
Pot	\$6.40

1

PICNIC:

Buy a sandwich and juice.
Find the total and change from \$15.



2

PICNIC:

Buy 2 fruit cups.
Find a nearest-dollar estimate and exact total.



3

ART:

Buy a sketchbook and markers.
Is \$25 enough?
Find the change.



4

ART:

Buy 2 brushes.
Find the exact total.



5

GAMES:

Buy a puzzle and card game.
Find the total and change from \$30.



6

GAMES:

Buy 2 sports balls.
Find an upper estimate and exact total.



7

GARDEN:

Buy a pot and gloves.
Find a nearest-dollar estimate and exact total.



8

GARDEN:

Buy 4 seed packets.
Find the total and money left from \$20.





BUDGET TRAIL — PLAYER RECORD



Player: _____

Starting budget: **\$60.00**

Task	Estimate	Exact cost	Money left
1			
2			
3			
4			
5			
6			
7			
8			

PREVIEW



Final balance: _____



One adjustment I made: _____



One check I used: _____

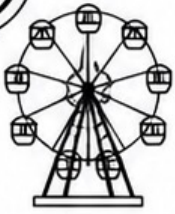


CHECK KEY

1 \$9.30; \$5.70 | 2 \$9; \$9.60 | 3 Yes; \$2.70 | 4 \$9.20 |
5 \$22.85; \$7.15 | 6 \$38; \$36.80 | 7 \$15; \$15.30 | 8 \$15.00; \$5.00

⇒ Copy one record page for each player. ⇒

COMMUNITY FAIR BUDGET ASSESSMENT — PART A



Name: _____

Date: _____

Total: ____ / 15



- 1** Four entry tickets cost \$6.75 each. Find a lower estimate, upper estimate and exact total. (4 points)

Work:

Lower estimate: \$ _____

Upper estimate: \$ _____

Exact total: \$ _____

- 2** Estimate $\$18.70 + \$22.40 + \$9.60$ to the nearest dollar. Then find the exact total. (3 points)

Work:

Estimate: \$ _____

Exact total: \$ _____

- 3** Use rounding and adjustment to calculate 3×12.99 . (3 points)

Work:

Exact answer: \$ _____

- 4** Use rounding and adjustment to calculate $6 \times \$29$. (3 points)

Work:

Exact answer: \$ _____

- 5** Kai says $5 \times \$56$ is exactly \$300 because $5 \times \$60 = \$300$. Explain the error and give the exact answer. (2 points)

Work:

Exact answer: \$ _____



COMMUNITY FAIR BUDGET ASSESSMENT – PART B

Name: _____ Date: _____ Total: ____ / 15

Your class has \$150.00 to prepare a community fair stall.



Item	Price (exact)	Include the following items: • one banner • two prize packs • two drink crates • one table cover Choose either one snack box or one set of game supplies.
Banner	\$18.40	
Prize pack	\$12.60	
Drink crate	\$21.50	
Snack box	\$14.75	
Table cover	\$16.80	
Game supplies	\$27.90	



1. Find an upper estimate for the required items and your chosen optional item. (3 points)

2. Complete the plan. (4 points)

Item	Quantity	Exact cost

3. Find the exact total and money left from \$150. (3 points)

Exact total: \$ _____ Money left from \$150: \$ _____

4. The teacher asks for at least a \$20 safety buffer. Adjust the optional item if needed and explain. (3 points)

5. Explain how an estimate proves your final answer is reasonable. (2 points)



COMMUNITY FAIR BUDGET ASSESSMENT — PART A

ANSWERS

Date: _____

Total: 15 / 15



- 1 Four entry tickets cost \$6.75 each. Find a lower estimate, upper estimate and exact total. (4 points)

Work:

$$\text{Lower } 4 \times \$6 = \$24$$

$$\text{Upper } 4 \times \$7 = \$28$$

$$\text{Exact total } 4 \times \$6.75 = \$27.00$$

Lower estimate: \$ 24

Upper estimate: \$ 28

Exact total: \$ 27.00

- 2 Estimate $\$18.70 + \$22.40 + \$9.60$ to the nearest dollar. Then find the exact total. (3 points)

Work:

$$\text{Estimate } \$19 + \$22 + \$10 = \$51$$

$$\text{Exact total } \$50.70$$

Estimate: \$ 51

Exact total: \$ 50.70

- 3 Use rounding and adjustment to calculate $3 \times \$70$. (3 points)

Work:

$$3 \times \$70 = \$210$$

$$\text{subtract } 3 \times \$2 = \$6$$

Exact answer: \$ 204

- 4 Use rounding and adjustment to calculate $6 \times \$29$. (3 points)

Work:

$$6 \times \$30 = \$180$$

$$\text{subtract } 6 \times \$1 = \$6$$

Exact answer: \$ 174

- 5 Kai says $5 \times \$56$ is exactly \$300 because $5 \times \$60 = \$300$. Explain the error and give the exact answer. (2 points)

Work:

Kai forgot to adjust after
rounding \$56 up to \$60.

$$\text{Subtract } 5 \times \$4 = \$20.$$

$$\text{Exact answer } \$280.$$

Exact answer: \$ 280



COMMUNITY FAIR BUDGET ASSESSMENT – PART B

ANSWERS

Date: _____ Total: 15 / 15

Your class has \$150.00 to prepare a community fair stall.



Item	Price (exact)	Include the following items: • one banner • two prize packs • two drink crates • one table cover Choose either one snack box or one set of game supplies.
Banner	\$18.40	
Prize pack	\$12.60	
Drink crate	\$21.50	
Snack box	\$14.75	
Table cover	\$16.80	
Game supplies	\$27.90	



1. Find an upper estimate for the required items and your chosen optional item. (3 points)

Upper estimate: $\$19 + 2 \times \$13 + 2 \times \$22 + \$17 + \$15 = \$121.$

2. Complete the plan. (4 points)

Item	Quantity	Exact cost
Banner	1	\$18.40
Prize pack	2	\$25.20
Drink crate	2	\$43.00
Table cover	1	\$16.80
Snack box	1	\$14.75

3. Find the exact total and money left from \$150. (3 points)

Exact total: \$ 118.15 Money left from \$150: \$ 31.85

4. The teacher asks for at least a \$20 safety buffer. Adjust the optional item if needed and explain. (3 points)

The snack box already leaves a \$31.85 buffer, so no adjustment is needed. Game supplies would leave only \$18.70.

5. Explain how an estimate proves your final answer is reasonable. (2 points)

The exact \$118.15 is below the \$121 upper estimate and leaves about \$32, so it is reasonable.





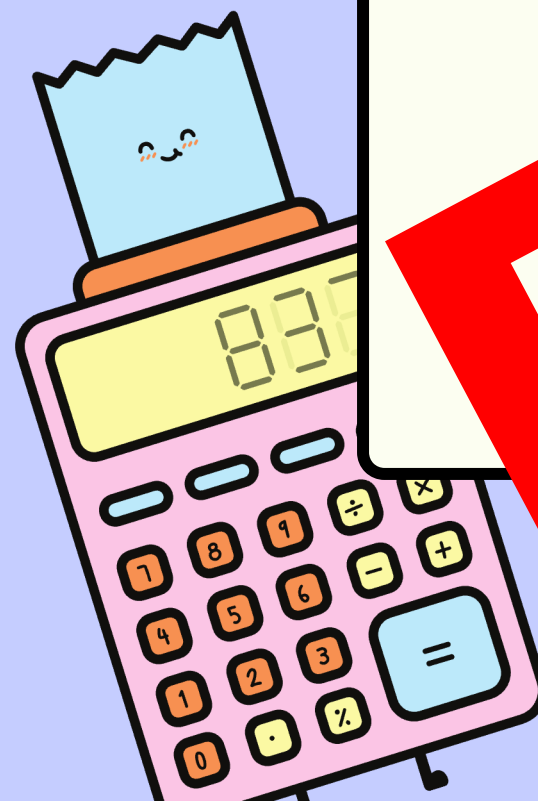
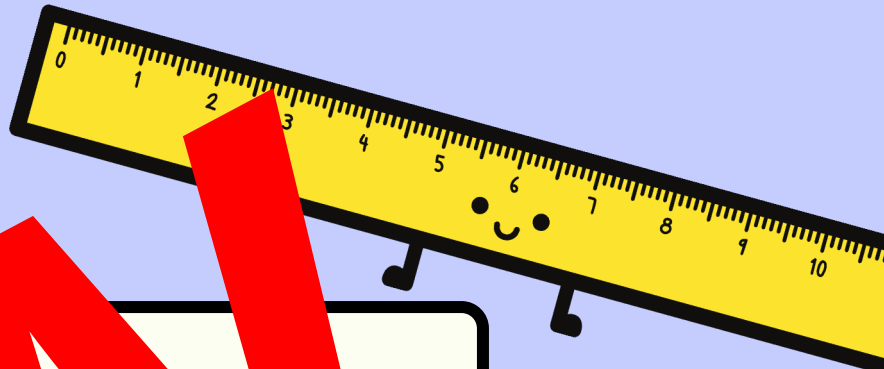
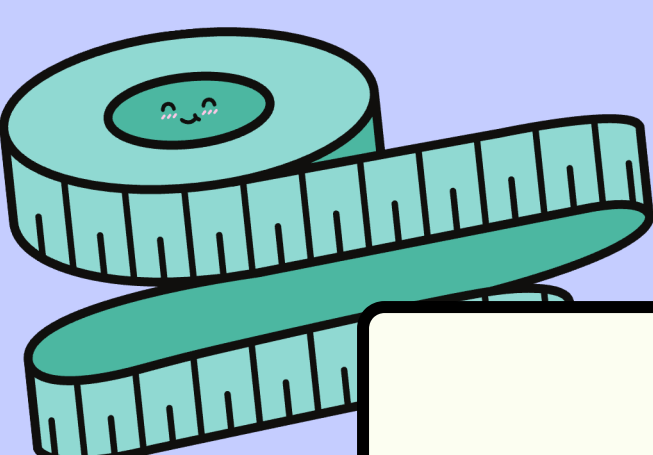
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Score: / 25

Criteria	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
Estimating	Estimate is far from the exact answer or missing; reasoning is not clear. Help is needed.	Estimate is somewhat clear, reasoning is limited and needs support.	Estimate is reasonably close to the exact answer with some clear reasoning.	Estimate is close to the exact answer and explained with clear reasoning.	Estimate is very close to the exact answer and explained clearly and in detail.
Exact calculations	Few calculations are correct. Strategies are not shown and working is not clear.	Some calculations are correct. Limited strategies are used and working is partly shown.	Most calculations are correct. Appropriate strategies are used and working is shown clearly.	All calculations are correct. Efficient strategies are used and working is clear and well-organised.	All calculations are correct. Efficient and creative strategies are used and working is thorough and easy to follow.
Budgeting	Budget is incomplete or does not meet most conditions. Errors in totals and allocations. Help is needed.	Budget meets some conditions but has errors in totals or allocations. Support is needed.	Budget meets the conditions with minor errors in totals or allocations.	Budget meets all conditions. Totals and allocations are accurate and well thought out.	Budget meets all conditions. Totals and allocations are accurate, realistic and show excellent planning.
Reasoning and checking	Limited explanation. Checks are not evident or are incorrect. Help is needed.	Explanation is basic and partly unclear. Checks are limited and inconsistent.	Explanation is clear and solutions are checked and answers are reasonable.	Explanation is clear and logical. Solutions are checked and mistakes are corrected.	Explanation is clear, logical and detailed. Solutions are thoroughly checked and justified.
Mathematical communication	Uses incorrect or unclear money language, symbols or units. Organisation is unclear.	Uses some money language, symbols and units with mistakes. Organisation is basic.	Uses correct money language, symbols and units. Organisation is clear.	Uses correct money language, symbols and units. Work is well-organised and easy to follow.	Uses correct and precise money language, symbols and units. Work is outstanding and easy to follow.

Each criterion is scored 1–5. Total score out of 25.





PREVIEW

**Problem Solving
with Money
Year 4**



Learning Intention

We are learning to estimate money totals, calculate accurately and check spending plans against a budget.

Success looks like:

- I choose a useful estimate.
- I calculate an exact total.
- I explain my money answers and reasons.



Estimate First

An estimate is a quick, sensible prediction.

Estimate before you calculate to:

- check whether you have enough money
- choose between options
- notice an unreasonable exact answer



Lower and Upper Bounds

Lower bound: round each price down to the whole dollar.

Upper bound: round each price up to the whole dollar.

The exact total should lie between these bounds.



Worked Example

Five tickets cost \$3.70 each.

Lower: $5 \times \$3 = \$15$

Upper: $5 \times \$4 = \$20$

Exact: $5 \times \$3.70 = \$18.50$

\$18.50 lies between \$15 and \$20.



Your Turn

Four tickets cost \$6.40 each.

Lower: $4 \times \$6 = \$24$

Upper: $4 \times \$7 = \$28$

Exact: $4 \times \$6.40 = \$25.60$



Does It Make Sense?

Compare the exact answer with the estimate.

If $4 \times \$6.40$ were calculated as \$256, the hours \$24 to \$28 would show that the answer is unreasonable.



Choose a Useful Estimate

Use a lower bound to show the least possible whole-dollar total.

Use an upper bound for a safe maximum.

Use nearest-dollar rounding for a close reason.



Guided Practice

Three books cost \$7.85 each.

Bounds: \$21 to \$24

Nearest-dollar estimate: $3 \times \$8 = \$24$

Exact total: $3 \times \$7.85 = \$23.55$



Round to the Nearest Dollar

Cents below 50 round down.

Cents of 50 or more round up.

$\$8.30 \rightarrow \$8$

$\$5.75 \rightarrow \$6$

$\$12.50 \rightarrow \$13$



Estimate a Shopping Total

$$\$8.60 + \$12.30 + \$5.75$$

$$\$9 + \$12 + \$6 = \$27$$

Exact total: \$26.65

The exact answer is close to the estimate.



Talk and Check

A spending limit is \$30.

Would a lower bound, an upper bound or a best-dollar estimate be most useful?

Explain how your choice helps you decide safely.



Round and Adjust

Compensation uses a friendly number to calculate exactly

1. Round to a friendly amount.
2. Calculate.
3. Add or subtract the total difference



Worked Example

$$3 \times \$68$$

Round \$68 up to \$70.

$$3 \times \$70 = \$210$$

The extra is $3 \times \$2 = \$6$

$$\$210 - \$6 = \$204$$



Another Example

$$4 \times \$84$$

Round \$84 down to \$80.

$$4 \times \$80 = \$320$$

The missing amount is $4 \times \$4 = \$16$.

$$\$320 + \$16 = \$336$$



Your Turn

$$5 \times \$56$$

$$5 \times \$60 = \$300$$

$$\text{Subtract } 5 \times \$4 = \$20$$

Exact total: \$280



Check for Reasonableness

$5 \times \$56$ should be close to $5 \times \$60$.

An answer of \$28 is too small.

An answer of \$2,800 is too large.

\$280 is reasonable.



What Is a Budget?

A budget is a plan for a set amount of money.

Fixed costs must be included.

Optional costs are choices.

Money left is the difference between the budget and the exact total.



Needs, Wants and Choices

Needs help the plan meet its purpose.

Wants can improve the plan but may be optional.

Strong budget decisions include reasons and stay within the limit.



Build In a Buffer

A buffer is money deliberately left unspent.

A careful upper estimate can protect the budget from all forgotten costs or price changes.



Budget Steps

1. List the required items.
2. Estimate the total.
3. Calculate exactly.
4. Compare with the budget.
5. Adjust choices if needed.
6. Check and explain.



Class Market Scenario

Budget: \$120

Display board \$18.40

Two paper-bag packs \$14.50

Marker pack \$12.60

Table cover \$16.80

Float box \$21.50

Decorations \$7.75

Stickers \$8.90



Calculate the Plan

Exact total: \$102.45

Money left: $\$120.00 - \$102.45 = \$17.55$

Check: $\$102.45 + \$17.55 = \$120.00$

The plan is within budget

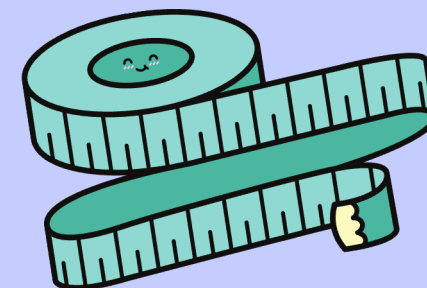
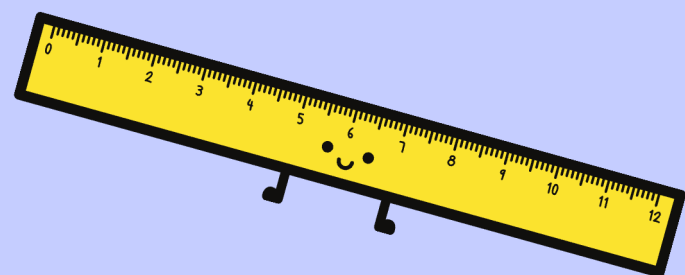
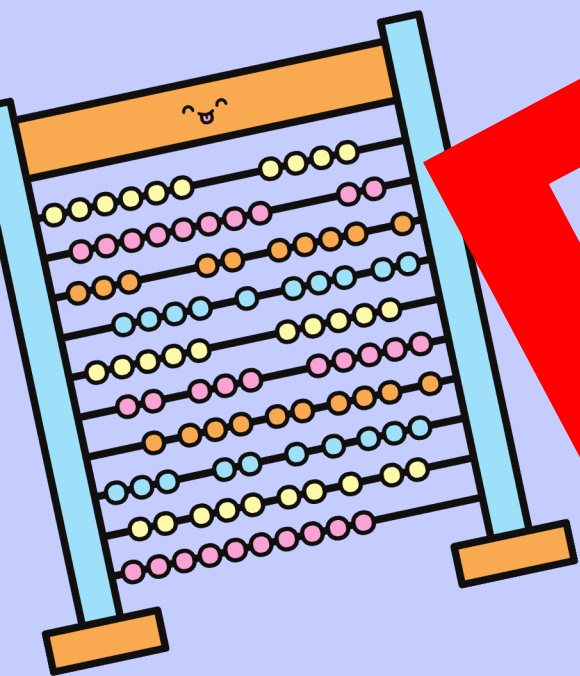
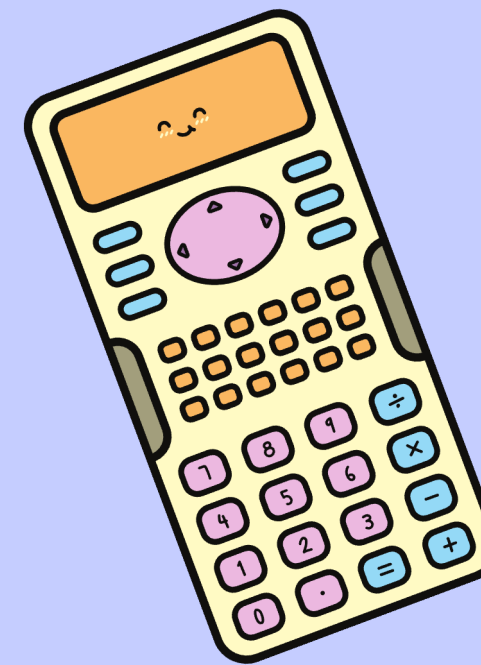
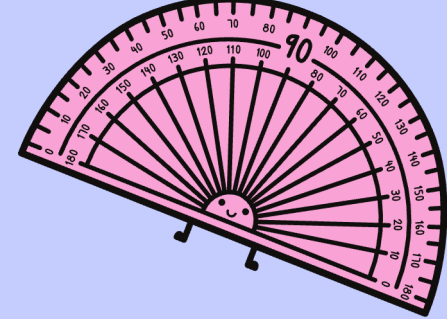
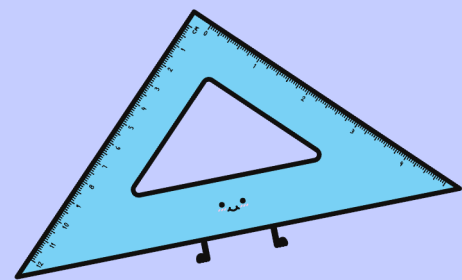
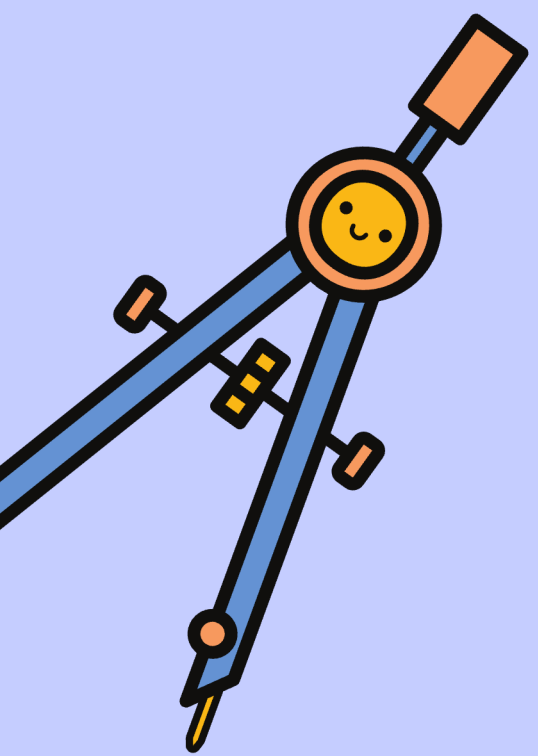


Reflect and Explain

Could you add another optional item and still keep a \$10 budget?

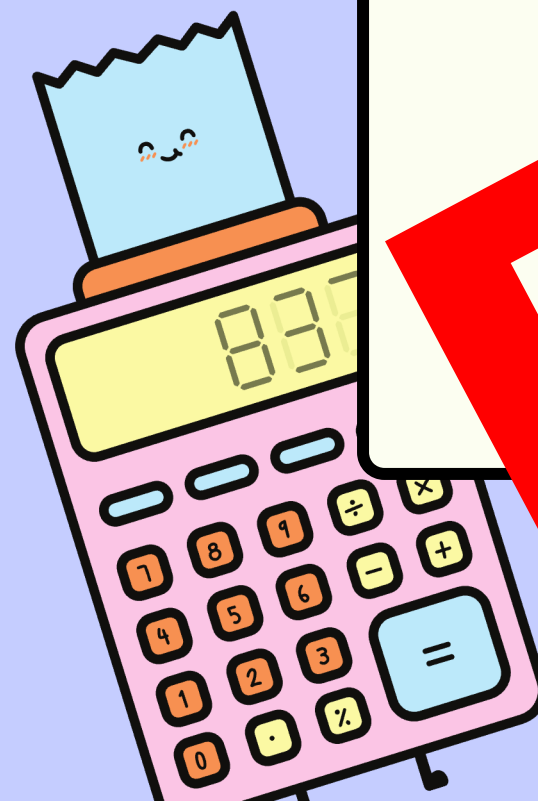
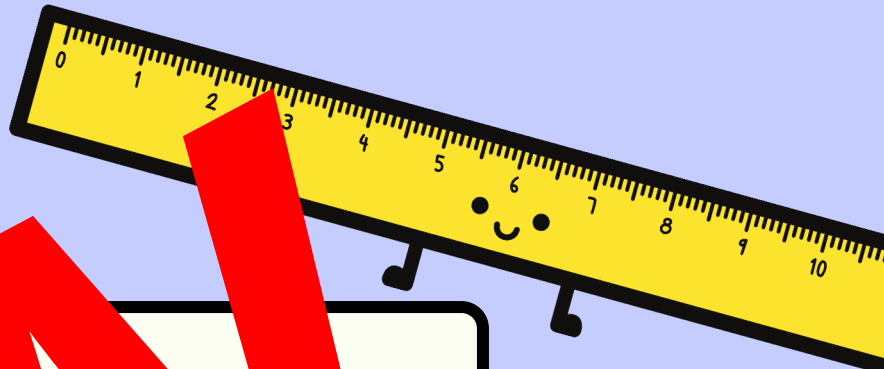
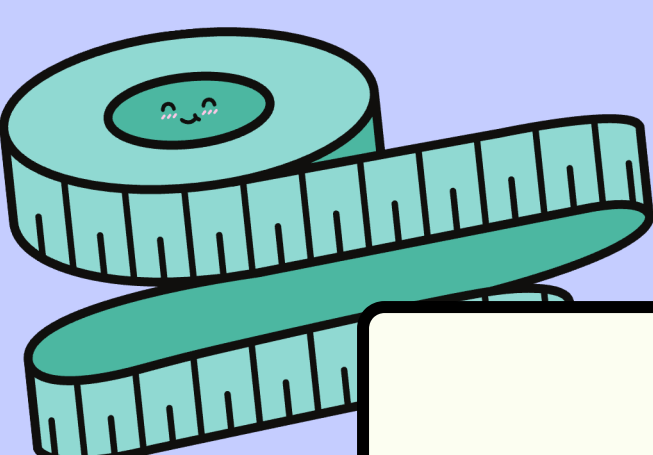
Choose a change, calculate the new total, and justify whether the revised plan is sensible.





PREVIEW

Well Done!



PREVIEW

**Problem Solving
with Money Quiz
Year 4**



Question 1: Multiple Choice

What is the closest estimate for $4 \times \$6.75$?

- A \$20 B \$24
C \$28 D \$32



Answer 1

C \$28

\$6.75 rounds to \$7, and $4 \times \$7 = \$28$.



Question 2: True or False

Five snacks at \$3.40 each cost between \$15 and \$20.

PREVIEW



Answer 2

TRUE

Bounds are \$15 to \$20.

Exact total: $5 \times \$3.40 = \$17.00$.



Question 3: Short Response

Use rounding and adjustment to calculate $3 \times \$68$.

PREVIEW



Answer 3

$$3 \times \$70 = \$210$$

$$\text{Subtract } 3 \times \$2 = \$6$$

Exact answer: \$204



Question 4: Multiple Choice

Which pair is within a \$25 budget?

A Book \$15.60 + ball \$18.40

B Notebook \$9.80 + markers \$12.50

C Backpack \$29.50 + ruler \$3.40



Answer 4

B

$$\$9.80 + \$12.50 = \$22.30$$

Money left: \$2.70



Question 5: Short Response

You spend \$32.65 and pay with \$50.

How much change should you receive?



Answer 5

\$17.35

$$\$50.00 - \$32.65 = \$17.35$$



Question 6: True or False

Rounding every price up always gives an underestimate.

PREVIEW



Answer 6

FALSE

Rounding every price up gives an upper estimate

PREVIEW



Question 7: Multiple Choice

Which exact total stays within a \$100 budget?

- A \$101.25
- B \$100.80
- C \$96.40
- D \$104.60



Answer 7

C \$96.40

Money left: $\$100.00 - \$96.40 = \$3.60$



Question 8: Short Response

Calculate the exact cost of 4 items at \$12.50 each.

PREVIEW



Answer 8

\$50.00

$$4 \times \$12.50 = \$50.00$$



Question 9: Multiple Choice

What is the best nearest-dollar estimate for
 $\$18.70 + \$22.40 + \$9.60$?

A \$49 B \$50 C \$51 D \$52



Answer 9

C \$51

$$\$19 + \$22 + \$10 = \$51$$



Question 10: Short Response

A plan costs \$73.85 from an \$80 budget.

Find the money left and state one reasonableness check.

PREVIEW

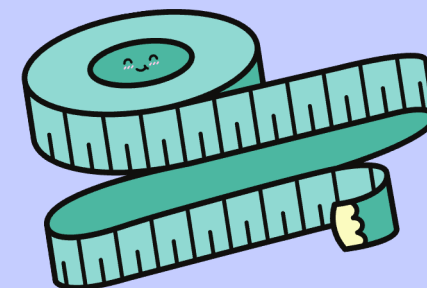
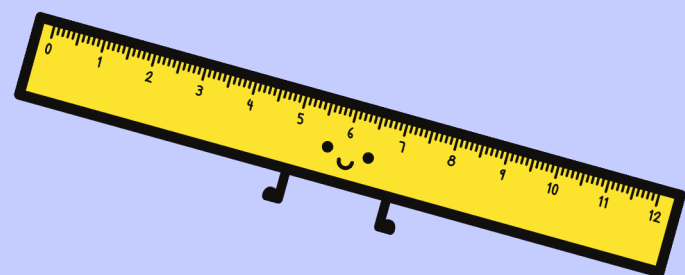
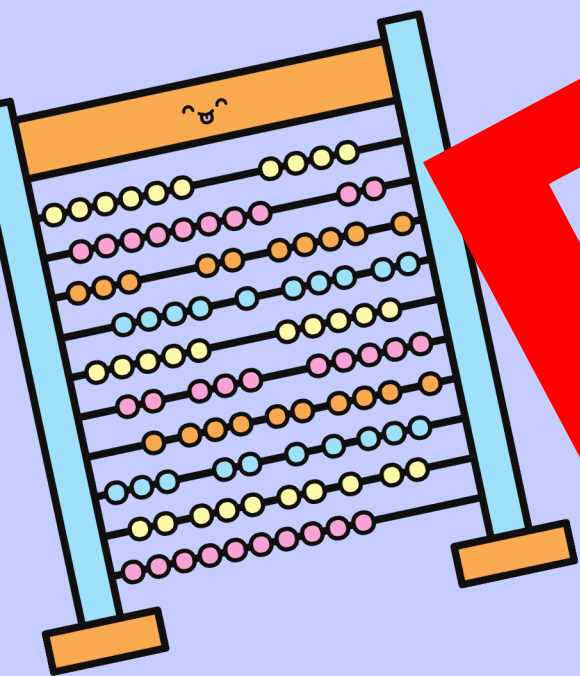
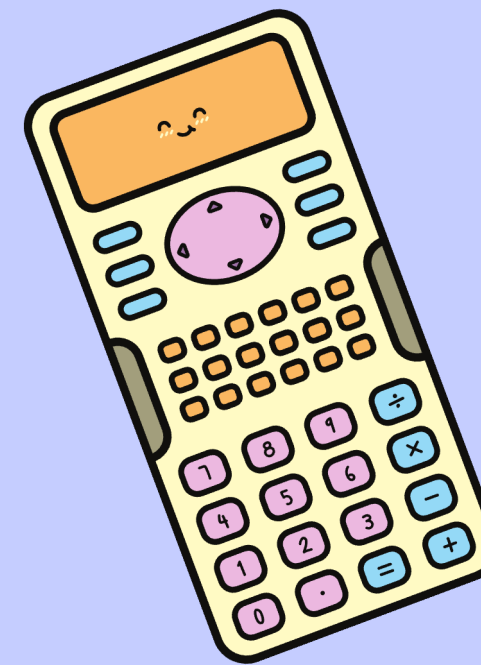
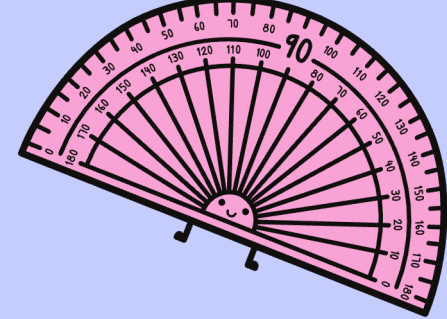
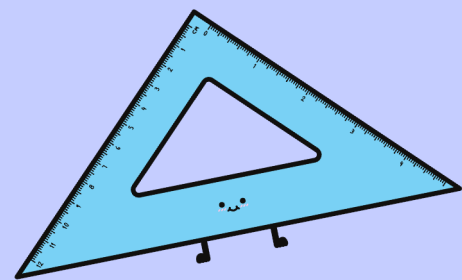
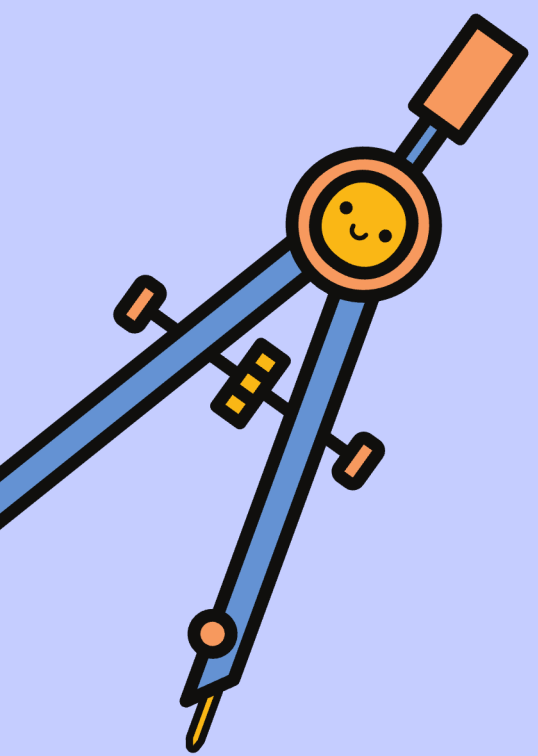


Answer 10

\$6.15 left

Check: \$73.85 is about \$74, which is about \$6 below \$80





PREVIEW

Well Done!