6 MISSIONS

FIELD DAY DIRECTOR

DIVISION MATH PROJECT · LONG DIVISION

4-5 GRADES

3 LEVELS

My name _____



MISSION 3

Snack Stand



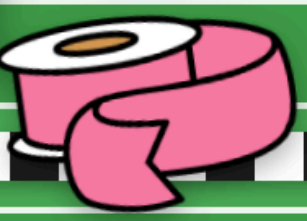
Divide to fill the table. Show your work in the boxes.

The snack stand counted its money. Divide what each snack earned by its price to find how many sold.

	earned (dollars)	price of one (dollars)	how many sold
Popcorn	96	2	
Pretzels	87	3	
Lemonade	72	4	
Watermelon	95	5	







Start Here: Field Day Director



Your students are hired to run a field day for an invented school of **204 students** (96 in Grade 4, 108 in Grade 5), 12 adults and 8 classrooms. Six missions each put a **data table** in front of the child: teams, a rotation schedule, the snack stand, the supply order, buses and lunch, awards and ribbons. The child divides to fill the table, then answers one follow-up where the leftover has to mean something. The same six missions come at three levels, and a two-page Director's Report pulls the starred number from every mission.

The three steps

1. **Hire.** Read the briefing (page 4) together, sign the contract, cut out the badge and stamps (page 5). 2. **Missions.** Give each child the six mission pages for one shape. A finished mission earns its stamp on the tracker (page 6). 3. **Report.** The Director's Report (pages 27-28), the sign-off (page 29) and the certificate (page 40).

What is inside

Part	Pages	What it is
Hire the Director	4-6	Briefing and contract, badge and mission stamps to cut, mission tracker.
Teach the leftover	7-8	What a remainder means (left over, one more, only full ones) and a division steps card.
Circle missions 1-6	9-14	1-digit divisors, numbers under 120.
Square missions 1-6	15-20	1-digit divisors, 3- and 4-digit numbers, money and measures.
Triangle missions 1-6	21-26	2-digit divisors, 3- and 4-digit numbers.
Director's Report	27-29	The plan, the budget, and the sign-off checklist.
Examples	30-31	Mission 3 and the budget, completed by Sam, an invented student.
Answer keys	32-38	One page per mission with all three levels, plus the lesson, card and report.
Family letter, certificate	39-40	A note home and a Director's certificate to fill in.

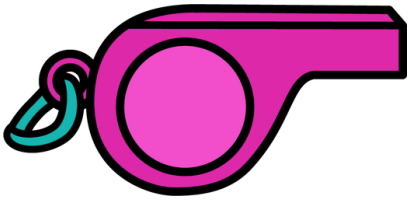
Three levels, marked with a shape

● **Circle**: 1-digit divisors, numbers under 120. ■ **Square**: 1-digit divisors, 3- and 4-digit numbers, money and measures. ▲ **Triangle**: 2-digit divisors, 3- and 4-digit numbers. Circle and square plan the 8 morning stations; triangle plans all 16.

The shape is the only mark of the level, so three children at one table can work three levels. 87 division problems in the missions, 41 with a remainder to read in context. Nothing is scored. Print, or type into the tables; the work boxes are for pencil.

PREVIEW

My name _____



YOU ARE HIRED!
Field Day Director

Read the facts. Add them up. Then sign your contract.

Dear Director, our school needs a field day. You will make the teams, set the clock, run the snack stand, order the supplies, fill the buses and hand out the awards. Here are the facts.

Students in Grade 4	96
Students in Grade 5	108
Adults helping	12
Classrooms in each grade	4
Stations in the morning	8
Stations after lunch	8

Students in all 96 + 108 = _____

People in all 204 + 12 = _____

Classrooms in all 4 + 4 = _____

Stations in all 8 + 8 = _____

Your six missions



1. Teams and Stations



2. Rotation Schedule



3. Snack Stand



4. Supply Order



5. Buses and Lunch



6. Awards and Ribbons

My shape: ▢ ● ▢ ■ ▢ ▲ (your teacher picks it with you)

Director's contract

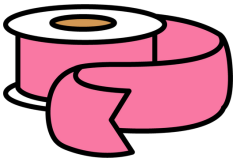
I, _____, accept the job of Field Day Director. I will divide carefully, show my work, and decide what every leftover means.

Signed **Date**

PREVIEW

Preview - Bright Path Shed

My name _____



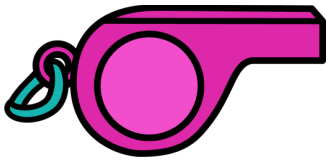
MY BADGE AND STAMPS

Cut on the dashed lines

Cut out the 8 pieces. Wear the badge. Glue a stamp on your tracker when a mission is done.

FIELD DAY

DIRECTOR



Name

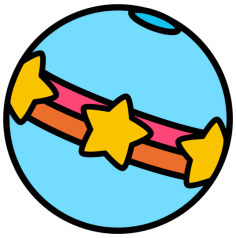
_____

School

_____

MISSION 1

Teams and Stations



done!

MISSION 2

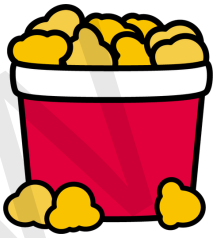
Rotation Schedule



done!

MISSION 3

Snack Stand



done!

MISSION 4

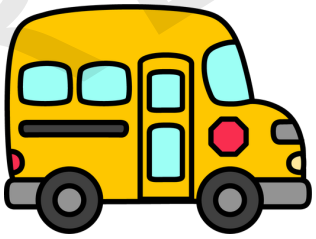
Supply Order



done!

MISSION 5

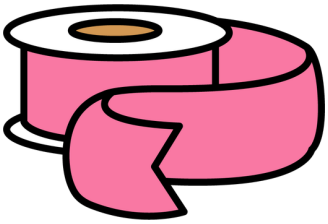
Buses and Lunch



done!

MISSION 6

Awards and Ribbons



done!

STAMP

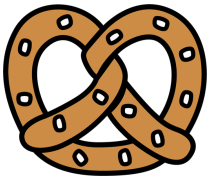
Report filed



Director's Report

PREVIEW

My name _____



BEFORE THE MISSIONS

What does the leftover mean?

Read the three. Then try three of your own.

4 ⟌ 29

4 x 7 = 28
29 - 28 = 1

29 pretzels go on 4 plates equally. How many on each plate?

☑ **left over** ☐ **one more** ☐ **only full ones**

The 1 pretzel left over stays in the bag. The leftover just stays. **7 pretzels on each plate, 1 left over.**

6 ⟌ 38

6 x 6 = 36
38 - 36 = 2

38 helpers ride in vans that hold 6. How many vans?

☐ **left over** ☑ **one more** ☐ **only full ones**

6 vans carry 36. The 2 helpers left over still need a ride, so you need one more van. **7 vans.**

9 ⟌ 83

9 x 9 = 81
83 - 81 = 2

83 ribbons are tied in bundles of 9. How many full bundles?

☐ **left over** ☐ **one more** ☑ **only full ones**

9 bundles use 81. The 2 ribbons left over are not a full bundle, so only full ones count. **9 full bundles.**

Try it

50 students ride in vans that hold 8. How many vans?

8 ⟌ 50

☐ **left over**
☐ **one more**
☐ **only full ones**

Answer _____

65 ribbons are tied in bundles of 7. How many full bundles?

7 ⟌ 65

☐ **left over**
☐ **one more**
☐ **only full ones**

Answer _____

41 balls are shared by 6 teams equally. How many for each team? How many left over?

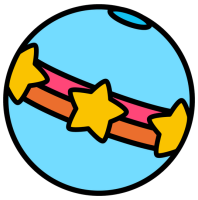
6 ⟌ 41

☐ **left over**
☐ **one more**
☐ **only full ones**

Answer _____

PREVIEW

My name _____



MISSION 1

Teams and Stations



Divide to fill the table. Show your work in the boxes.

Each room makes teams for the relay. Divide to find how many teams, and who is left over to be a helper.

	students	on each team	teams	left over
Room 4A	24	4		
Room 4B	23	4		
Room 5A	27	3		
Room 5B	28	5		

$4\overline{)24}$

$4\overline{)23}$

$3\overline{)27}$

$5\overline{)28}$

$8\overline{)96}$

★ **Report this one. Grade 4 has 96 students. They spread out over 8 stations, the same number at each. How many students are at each station?**

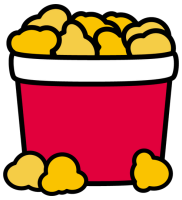
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ students at each station

PREVIEW

My name _____



MISSION 3
Snack Stand



Divide to fill the table. Show your work in the boxes.

The snack stand counted its money. Divide what each snack earned by its price to find how many sold.

	earned (dollars)	price of one (dollars)	how many sold
Popcorn	96	2	
Pretzels	87	3	
Lemonade	72	4	
Watermelon	95	5	

$2\overline{)96}$

$3\overline{)87}$

$4\overline{)72}$

$5\overline{)95}$

PREVIEW

★ **Best seller:** _____ **sold** _____

$8\overline{)19}$

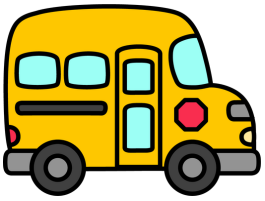
One watermelon cuts into 8 slices. 19 slices were sold. How many watermelons were cut?

The leftover means: ☐ left over ☐ one more

☐ only full ones

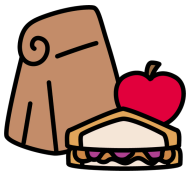
Answer _____ watermelons

My name _____



MISSION 5

Buses and Lunch



Divide to fill the table. Show your work in the boxes.

Everyone needs a seat and a lunch spot. Divide, and if anyone is left over, add one more.

	how many	fit in each	how many needed	empty spots
★ Picnic tables (100 people)	100	8		
Vans for Room 4A	24	6		
Vans for Room 4B	23	6		
Vans for adults	12	5		

8 ⟌ 100

6 ⟌ 24

6 ⟌ 23

5 ⟌ 12

★ **Budget card for your Director's Report (page 28): Vans cost: 120 dollars**

6 ⟌ 98

Juice boxes come 6 to a pack. Grade 4 needs 98 juice boxes. How many packs do you open?

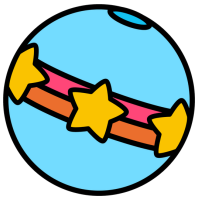
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ packs of juice

PREVIEW

My name _____



MISSION 1
Teams and Stations



Divide to fill the table. Show your work in the boxes.

Make equal teams for the whole school. Divide to find how many teams, and who is left over to be a helper.

	students	on each team	teams	left over
Grade 5	108	7		
Both grades	204	6		
Students and adults	216	8		
Relay race	204	9		

7 ⟌ 108

6 ⟌ 204

8 ⟌ 216

9 ⟌ 204

8 ⟌ 204

★ **Report this one. All 204 students spread out over 8 stations, the same number at each. How many are at each station? The leftover students help the Director.**

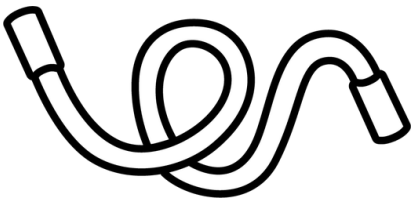
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ students at each station

PREVIEW

My name _____



MISSION 4

Supply Order



Divide to fill the table. Show your work in the boxes.

Supplies come in packs. Divide to find how many packs to order. If some are left over, order one more pack.

	we need	in one pack	packs to order	extras
★ Balls	204	8		
Water bottles	1,296	6		
Jump ropes	408	9		
Cups	1,032	8		

8 ⟌ 204

6 ⟌ 1,296

9 ⟌ 408

8 ⟌ 1,032

★ **Budget card for your Director's Report (page 28): Supply order cost: 1,352 dollars**

8 ⟌ 1,352

The supply order costs 1,352 dollars. The 8 classrooms share the cost equally. How much does each classroom pay?

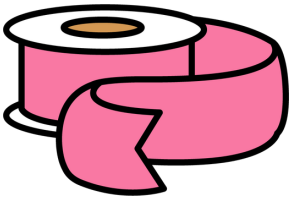
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ dollars from each classroom

PREVIEW

My name _____



MISSION 6

Awards and Ribbons



Divide to fill the table. Show your work in the boxes.

Make awards from what you have. Divide to find how many you can make. Only whole ones count.

	we have	each one uses	how many we make	left over
★ Red ribbon (inches)	1,200	8		
Gold ribbon (inches)	1,000	9		
Trophy stickers	1,250	6		
Medals in boxes	612	9		

8 ⟌ 1,200

9 ⟌ 1,000

6 ⟌ 1,250

9 ⟌ 612

★ **Budget card for your Director's Report (page 28): Awards cost: 607 dollars**

4 ⟌ 607

The awards cost 607 dollars. The PTA pays in 4 equal payments. How much is each payment? The leftover dollars come from the class jar: how many?

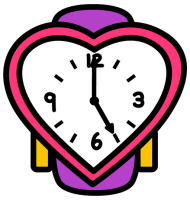
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ dollars in each payment

PREVIEW

My name _____



MISSION 2

Rotation Schedule



Divide to fill the table. Show your work in the boxes.

The clock is yours: 8 stations in the morning and 8 more after lunch. Share each block of minutes into equal turns.

	minutes	equal turns	minutes for each	minutes left
★ All 16 stations, whole day	240	16		
Warm-up games	150	12		
Relay heats	360	24		

16 ⟌ 240

12 ⟌ 150

24 ⟌ 360

★ **Morning timetable, 8 stations: start at 9:00. Add the minutes for each station.**

Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8
9:00							

45 ⟌ 1,230

The dance break music lasts 1,230 seconds. Each song is 45 seconds long. How many whole songs can play?

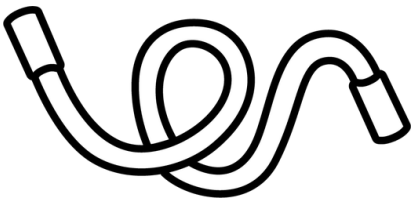
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ whole songs

PREVIEW

My name _____



MISSION 4
Supply Order



▲

Divide to fill the table. Show your work in the boxes.

Supplies come in packs. Divide to find how many packs to order. If some are left over, order one more pack.

	we need	in one pack	packs to order	extras
★ Balls	204	12		
Water bottles	1,296	24		
Jump ropes	408	18		
Cups	1,032	36		

12 ⟌ 204

24 ⟌ 1,296

18 ⟌ 408

36 ⟌ 1,032

★ **Budget card for your Director's Report (page 28): Supply order cost: 1,352 dollars**

13 ⟌ 1,352

The supply order costs 1,352 dollars. The PTA pays it over 13 weeks, the same amount each week. How much is paid each week?

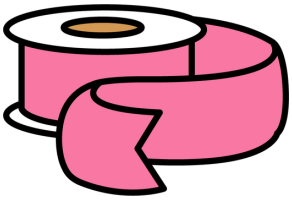
The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ dollars each week

PREVIEW

My name _____



MISSION 6

Awards and Ribbons



Divide to fill the table. Show your work in the boxes.

Make awards from what you have. Divide to find how many you can make. Only whole ones count.

	we have	each one uses	how many we make	left over
★ Red ribbon (inches)	1,200	18		
Gold ribbon (inches)	1,000	25		
Trophy stickers	1,250	17		
Medals in boxes	612	36		

18 ⟌ 1,200

25 ⟌ 1,000

17 ⟌ 1,250

36 ⟌ 612

★ **Budget card for your Director's Report (page 28): Awards cost: 545 dollars**

12 ⟌ 545

The awards cost 545 dollars. The PTA pays in 12 equal payments. How much is each payment? The leftover dollars come from the class jar: how many?

The leftover means: ☐ left over ☐ one more

☐ only full ones

Answer _____ dollars in each payment

PREVIEW

My name _____



LAST STEP

Director's Sign-off

Tick each line when it is true.

- [ ] My name is on every mission page.
- [ ] Every table box has a number in it.
- [ ] I showed my work in every box.
- [ ] I checked: divisor x answer + leftover = the big number.
- [ ] I ticked what each leftover means.
- [ ] I glued my six stamps on the tracker.
- [ ] My Director's Report has all six numbers and the budget.

Color 1, 2 or 3 circles: how much I liked each mission

1. Teams and Stations	○ ○ ○	2. Rotation Schedule	○ ○ ○
3. Snack Stand	○ ○ ○	4. Supply Order	○ ○ ○
5. Buses and Lunch	○ ○ ○	6. Awards and Ribbons	○ ○ ○

The hardest mission was

_____

because

_____

One thing I learned about leftovers

Director Teacher

PREVIEW

Preview - Bright Path Sped

My name Sam (an invented student)



DIRECTOR'S REPORT, PAGE 2

My Field Day Budget

Copy the money from your budget cards. Add, subtract, then share.

Earned at the snack stand (Mission 3)	dollars
Popcorn	96
Pretzels	87
Lemonade	72
Watermelon	95
Total earned	350

Spent (budget cards)	dollars
Supply order (Mission 4)	96
Buses or vans (Mission 5)	120
Awards (Mission 6)	54
Total spent	270
Money left: earned - spent	80

80 divided by 8 = 10
8 x 10 = 80

The money left is shared equally by the 8 classrooms for next year's field day. How much does each classroom get?

Each classroom gets 10 **dollars** **left over** 0

Director's note to the principal: what went well, and what I would change

The snack stand earned more than we spent. Next year I would order one fewer pack of balls, because we had 6 extra.

PREVIEW

Answer Key: Mission 2, Rotation Schedule

Minutes for each: the leftover stays. Check: divisor × answer + leftover = the big number.

● Circle level (page 10)

	minutes	equal turns	minutes for each	minutes left	work
Morning stations	96	8	12	0	96 ÷ 8 = 12
Warm-up games	45	6	7	3	45 ÷ 6 = 7 r 3
Relay heats	84	7	12	0	84 ÷ 7 = 12

Follow-up: 75 ÷ 9 = 8 r 3. Leftover means **left over**. Answer: **8 minutes for each turn, 3 left over (r 3)**.
Timetable (12 minutes each): 9:00, 9:12, 9:24, 9:36, 9:48, 10:00, 10:12, 10:24.

■ Square level (page 16)

	minutes	equal turns	minutes for each	minutes left	work
Morning stations	200	8	25	0	200 ÷ 8 = 25
Whole day	405	6	67	3	405 ÷ 6 = 67 r 3
Relay heats	144	9	16	0	144 ÷ 9 = 16

Follow-up: 1,230 ÷ 9 = 136 r 6. Leftover means **left over**. Answer: **136 seconds for each song, 6 left over (r 6)**.
Timetable (25 minutes each): 9:00, 9:25, 9:50, 10:15, 10:40, 11:05, 11:30, 11:55.

▲ Triangle level (page 22)

	minutes	equal turns	minutes for each	minutes left	work
All 16 stations, whole day	240	16	15	0	240 ÷ 16 = 15
Warm-up games	150	12	12	6	150 ÷ 12 = 12 r 6
Relay heats	360	24	15	0	360 ÷ 24 = 15

Follow-up: 1,230 ÷ 45 = 27 r 15. Leftover means **only full ones**. Answer: **27 whole songs (15 left over, not enough for another)**.
Timetable (15 minutes each): 9:00, 9:15, 9:30, 9:45, 10:00, 10:15, 10:30, 10:45.

Notes

PREVIEW

Answer Key: Mission 4, Supply Order

Packs to order: round up when anything is left over. Check: divisor × answer + leftover = the big number.

● Circle level (page 12)

	we need	in one pack	packs to order	extras	work
Balls	50	8	7	6	50 ÷ 8 = 6 r 2
Jump ropes	36	6	6	0	36 ÷ 6 = 6
Water bottles	95	9	11	4	95 ÷ 9 = 10 r 5
Cups	84	7	12	0	84 ÷ 7 = 12

Follow-up: 96 ÷ 8 = 12. Leftover means **nothing is left over**. Answer: **12 dollars from each classroom.**
Budget card: Supply order cost 96 dollars.

■ Square level (page 18)

	we need	in one pack	packs to order	extras	work
Balls	204	8	26	4	204 ÷ 8 = 25 r 4
Water bottles	1,296	6	216	0	1,296 ÷ 6 = 216
Jump ropes	408	9	46	6	408 ÷ 9 = 45 r 3
Cups	1,032	8	129	0	1,032 ÷ 8 = 129

Follow-up: 1,352 ÷ 8 = 169. Leftover means **nothing is left over**. Answer: **169 dollars from each classroom.**
Budget card: Supply order cost 1,352 dollars.

▲ Triangle level (page 24)

	we need	in one pack	packs to order	extras	work
Balls	204	12	17	0	204 ÷ 12 = 17
Water bottles	1,296	24	54	0	1,296 ÷ 24 = 54
Jump ropes	408	18	23	6	408 ÷ 18 = 22 r 12
Cups	1,032	36	29	12	1,032 ÷ 36 = 28 r 24

Follow-up: 1,352 ÷ 13 = 104. Leftover means **nothing is left over**. Answer: **104 dollars each week.**
Budget card: Supply order cost 1,352 dollars.

Notes

PREVIEW

Answer Key: Mission 6, Awards and Ribbons

How many we make: only whole ones count. Check: divisor × answer + leftover = the big number.

● Circle level (page 14)

	we have	each one uses	how many we make	left over	work
Red ribbon (inches)	96	8	12	0	96 ÷ 8 = 12
Blue ribbon (inches)	75	9	8	3	75 ÷ 9 = 8 r 3
Trophy stickers	50	6	8	2	50 ÷ 6 = 8 r 2
Medals in boxes	48	8	6	0	48 ÷ 8 = 6

Follow-up: 54 ÷ 4 = 13 r 2. Leftover means **left over**. Answer: **13 certificates for each room, 2 left over (r 2)**.
Budget card: Awards cost 54 dollars.

■ Square level (page 20)

	we have	each one uses	how many we make	left over	work
Red ribbon (inches)	1,200	8	150	0	1,200 ÷ 8 = 150
Gold ribbon (inches)	1,000	9	111	1	1,000 ÷ 9 = 111 r 1
Trophy stickers	1,250	6	208	2	1,250 ÷ 6 = 208 r 2
Medals in boxes	612	9	68	0	612 ÷ 9 = 68

Follow-up: 607 ÷ 4 = 151 r 3. Leftover means **left over**. Answer: **151 dollars in each payment, 3 left over (r 3)**.
Budget card: Awards cost 607 dollars.

▲ Triangle level (page 26)

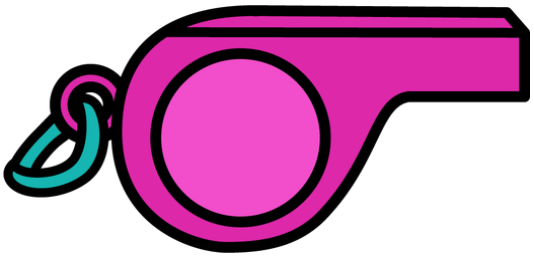
	we have	each one uses	how many we make	left over	work
Red ribbon (inches)	1,200	18	66	12	1,200 ÷ 18 = 66 r 12
Gold ribbon (inches)	1,000	25	40	0	1,000 ÷ 25 = 40
Trophy stickers	1,250	17	73	9	1,250 ÷ 17 = 73 r 9
Medals in boxes	612	36	17	0	612 ÷ 36 = 17

Follow-up: 545 ÷ 12 = 45 r 5. Leftover means **left over**. Answer: **45 dollars in each payment, 5 left over (r 5)**.
Budget card: Awards cost 545 dollars.

Notes

PREVIEW

Our Division Math Project



Date: _____

Dear family of

_____,

Your child has been hired as the Field Day Director of a pretend school with 204 students. Over six missions they divide to make teams, set a rotation schedule, count the snack stand money, order supplies in packs, fill buses and picnic tables, and make ribbons and awards. Every mission ends with a leftover, and the Director decides what it means: does it stay left over, do we need one more, or do only full ones count? The numbers are made up for practice, and nothing has to be bought.

Ask your Director

- "Which mission was hardest? Teach me one row of the table."
- "If 30 people need rides and a car seats 4, how many cars? Why not 7?"
- "When is a leftover a problem, and when can we just leave it?"

Make up a sharing problem with something at home. Write it and solve it here.

Your child's Director's certificate comes home when the report is filed.

From _____ Questions? _____

PREVIEW