

Maths in the Real World

ACTIVITY OVERVIEW

ACTIVITY 1

Bank

ACTIVITY 2

Book Shop

ACTIVITY 3

Supermarket

ACTIVITY 4

Gardening Centre

ACTIVITY 5

Cinema

ACTIVITY 6

Hardware Shop

ACTIVITY 7

Furniture Shop

ACTIVITY 8

Music Shop

ACTIVITY 9

Video Shop

ACTIVITY 10

Your own activity

Teacher guide notes

USEFULNESS

- Developing a greater understanding of shopping and business.
- Familiarising with a wide range of businesses (i.e. book shops, banks, supermarkets, gardening centres, cinemas, hardware stores, furniture stores, music shops, video shops) and the general types of products and services that they offer to their customers.
- Familiarising with specific terms and processes (i.e. depositing, withdrawing, interest, increasing, decreasing, new price, buying in bulk, in-store reward clubs).
- Using a wide-ranging mixture of operations and operators (i.e. fractions, percentages, number patterns, rates, averages).
- Practising and solving a large variety of shopping and business questions.
- Designing and creating their own activity.

MAIN IDEAS FOR THE LESSON

- Have a brainstorming session by using your smartboard and save it to your desktop.
- Ask a few of the students about shopping habits, i.e. their own, their family's, their friends', things they have seen in the media, and so on.
- Ask a few of the students about business in general: what's your favourite shop and why?; what do they sell?; how often do they have increases and decreases?; when do they have them?; do they use fractions or percentages on their signs and catalogues?
- Try a couple of introductory questions on the smartboard.
- Distribute the activity sheet and allow a few minutes for the students to read through it.
- Model 1 question of your choice on the smartboard.
- Ask 2 or 3 students about the next question that they would like you to model on it (fill in the missing parts and the answer while they discuss it and as they tell you).
- Allow up to 50 minutes for the lesson or plan it in another way (i.e. 2 shorter lessons which are 25 minutes each – one for the brainstorming and one for the completion of the activity sheet).
- Move through the classroom occasionally and ask individual students about the activity (i.e. coping, extra help, and so on) and collect the activity for marking.

OTHER IDEAS FOR THE LESSON

- The students could design an activity on another shop or business (i.e. based on the style and organisation of the activities in this chapter).
- The students could design an A4 sized poster to promote their own business (choose a type of business, name it, describe it, include prices, show increases or decreases, select graphics and other things).

- The students should work individually.
- The students could prepare a small or general type of study on a business of their choice (e.g. from their local shopping centre, from one on the internet, from a large city).
- The students could cut out advertisements from magazines and newspapers to create a shopping or business themed montage and highlight specific things (e.g. references to discounts or price rises, percentages, fractions, rates, averages, and so on).
- You could make a lucky dip which contains a large variety of question cards relating to shops and businesses and so on (i.e. allow each student or a small group of students to pick one card and complete it in a certain amount of time, you could also treat it as a game with several rounds of questions and answers, the winning student or group receives a little prize).

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ACTIVITY 6

HARDWARE SHOP

1

A dozen wooden posts costs \$800 at a hardware store. It is increased by 25%

What is the new price?

2

A water tank costs \$1900 at a hardware store. It is decreased by 40%.

What is the new price?

3

A roll of fencing wire costs \$360 at a hardware store. It is increased by $\frac{1}{4}$.

What is the new price?

4

A large bundle of fence palings costs \$480 at a hardware store. It is decreased by $\frac{1}{2}$.

What is the new price?

5

A marquee costs \$590 at a hardware store. It is increased by 10%.

What is the new price?

6

A garden archway costs \$140 at a hardware store. It is decreased by 30%.

What is the new price?

7

A family-sized clothesline costs \$630 at a hardware store. It is increased by $\frac{1}{7}$.

What is the new price?

8

A barbeque setting costs \$750 at a hardware store. It is decreased by $\frac{1}{5}$.

What is the new price?

9

A box of bathroom tiles costs \$270 at a hardware store. It is increased by 20%.

What is the new price?

10

A small greenhouse costs \$900 at a hardware store. It is decreased by 15%.

What is the new price?

11

A framed mirror costs \$48 at a hardware store. It is increased by $\frac{1}{6}$.

What is the new price?

12

A medium-sized shade sail costs \$87 at a hardware store. It is decreased by $\frac{1}{3}$.

What is the new price?

13

I spent these amounts of money on my visits to the hardware store for 5 weeks in a row.

\$1200, \$1500, \$1800, \$2100, \$2400

How much will I spend in the 6th week?

14

I bought 8 rolls of chicken wire at the hardware store which totalled \$1600. Each roll was the same price.

What would the total be for 9 of them?

15

I saved some money at the hardware store by buying my tiles in bulk over a period of 6 months. The amount that I saved each month was like this.

\$42, \$87, \$58, \$ 65, \$76, \$98

What is the average amount of these savings?

16

I saved some money at the hardware store by joining the valued visitor club. They told me that my savings in the first 7 months would be like this.

10%, 12%, 15%, 17%, 19%, 20%, 22%

What is the average amount of these savings?

Times Tables

ACTIVITY 2

5x TABLE

1

Can you complete the number pattern for the 5x table?

1	2	3	4	5	6	7	8	9	10	11	12
5											

2

Can you mark this test for the 5x table?

✓ = right ✗ = wrong – correct it

$5 \times 1 = 5$

$5 \times 8 = 40$

$5 \times 4 = 19$

$5 \times 11 = 54$

$5 \times 7 = 35$

$5 \times 3 = 15$

$5 \times 10 = 50$

$5 \times 6 = 29$

$5 \times 2 = 10$

$5 \times 9 = 44$

$5 \times 5 = 25$

$5 \times 12 = 60$

3

Can you write a number sentence from the 5x table which is mixed up in each box?

5 x = 12 60	5 x = 15 3	5 x = 8 40	5 x = 55 11	5 x = 6 30	5 x = 5 1

5 x = 10 2	5 x = 4 20	5 x = 35 7	5 x = 10 50	5 x = 25 5	5 x = 9 45

4

What is the missing number for each part of the 5x table?

$5 \times 1 = \square$

$5 \times 6 = \square$

$5 \times 11 = \square$

$5 \times \square = 25$

$5 \times \square = 50$

$5 \times \square = 20$

$5 \times 9 = \square$

$5 \times 3 = \square$

$5 \times 8 = \square$

$5 \times \square = 10$

$5 \times \square = 35$

$5 \times \square = 60$

5

Can you fill in the missing numbers for each group of 5x number sentences and put each group into order from smallest to biggest?

$5 \times 5 = \square$

$5 \times 2 = 10$

$5 \times 6 = \square$

$5 \times 3 = 15$

$5 \times 1 = 5$

$5 \times 4 = \square$

$5 \times 5 = \square$

$5 \times 2 = 10$

$5 \times 6 = \square$

$5 \times 3 = 15$

$5 \times 1 = 5$

$5 \times 4 = \square$

Number Sentence Groups and Grids

ACTIVITY 4

5x5 GROUP AND GRID

The last part of each line becomes the first part of the next line.

43	+	168	=	<input type="text"/>
<input type="text"/>	-	101	=	<input type="text"/>
<input type="text"/>	x	6	=	<input type="text"/>
<input type="text"/>	÷	30	=	<input type="text"/>

230	÷	10	=	<input type="text"/>
<input type="text"/>	+	468	=	<input type="text"/>
<input type="text"/>	-	91	=	<input type="text"/>
<input type="text"/>	x	7	=	<input type="text"/>

45%	x	80	=	<input type="text"/>
<input type="text"/>	÷	8	=	<input type="text"/>
<input type="text"/>	+	880	=	<input type="text"/>
<input type="text"/>	-	800	=	<input type="text"/>

189	-	52	=	<input type="text"/>
<input type="text"/>	x	9	=	<input type="text"/>
<input type="text"/>	÷	3	=	<input type="text"/>
<input type="text"/>	+	169	=	<input type="text"/>

59	+	47	=	<input type="text"/>
<input type="text"/>	-	26	=	<input type="text"/>
<input type="text"/>	x	11	=	<input type="text"/>
<input type="text"/>	÷	40	=	<input type="text"/>

300	÷	12	=	<input type="text"/>
<input type="text"/>	+	67	=	<input type="text"/>
<input type="text"/>	-	32	=	<input type="text"/>
<input type="text"/>	x	60	=	<input type="text"/>

$\frac{1}{8}$	x	1000	=	<input type="text"/>
<input type="text"/>	÷	8	=	<input type="text"/>
<input type="text"/>	+	168	=	<input type="text"/>
<input type="text"/>	-	98	=	<input type="text"/>

96	-	77	=	<input type="text"/>
<input type="text"/>	x	5	=	<input type="text"/>
<input type="text"/>	÷	19	=	<input type="text"/>
<input type="text"/>	+	997	=	<input type="text"/>

123	+	177	=	<input type="text"/>
<input type="text"/>	-	50	=	<input type="text"/>
<input type="text"/>	x	3	=	<input type="text"/>
<input type="text"/>	÷	10	=	<input type="text"/>

175	÷	7	=	<input type="text"/>
<input type="text"/>	+	149	=	<input type="text"/>
<input type="text"/>	-	85	=	<input type="text"/>
<input type="text"/>	x	9	=	<input type="text"/>

32.5	x	46	=	<input type="text"/>
<input type="text"/>	÷	13	=	<input type="text"/>
<input type="text"/>	+	477	=	<input type="text"/>
<input type="text"/>	-	168	=	<input type="text"/>

321	-	210	=	<input type="text"/>
<input type="text"/>	x	7	=	<input type="text"/>
<input type="text"/>	÷	111	=	<input type="text"/>
<input type="text"/>	+	239	=	<input type="text"/>