

# Homework 22

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Hand in: \_\_\_\_\_

Do not use a calculator for questions 1-10. You must show all of your working out. You may need to look up definitions or ask for some extra help either at home or at school for some of these questions.

<p>1. Simplify;</p> $5m + 3n - 2m$	<p>2. Expand the bracket by multiplying out;</p> $3(x - 4)$
<p>3. Substitute the values <math>a = 4</math> and <math>b = 7</math> into the expression,</p> $b - a$	<p>4. Find the median, mode and range for this list of data</p> $10, 3, 2, 8, 7$ <p>Median Mode Range</p>

5. Calculate

$$\frac{2}{7} \text{ of } 42$$

6. Write the ratio below in its simplest form.

$$8 : 12$$

7. Equivalent FDP. Fill in the gaps

Fraction	Decimal	Percent
		70%

8. Find 30% of 80kg

9. A jeweller uses 20g of silver to make a bracelet. How much silver does she need to make 12 bracelets?

10. Calculate;

$$15 - 2 \times 6$$

## Gold:

Answer the questions below and use these to complete the sentences.

$3 \times 3 = 9$

$2 \times 3 = 6$

$1 \times 3 = 3$

$0 \times 3 =$

$-1 \times 3 =$

$-2 \times 3 =$

$-3 \times 3 =$

$3 \times -3 =$

$2 \times -3 =$

$1 \times -3 =$

$0 \times -3 = 0$

$-1 \times -3 =$

$-2 \times -3 =$

$-3 \times -3 =$

When we multiply a negative number and a positive number together the answers is \_\_\_\_\_.

When we multiply two negative numbers together the answer is \_\_\_\_\_.

Complete the fact families below:

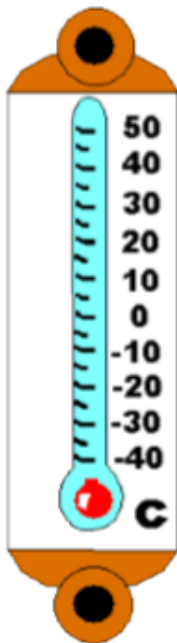
$5 \times -4 = -20$	$-8 \times -4 = \underline{\quad}$
$-4 \times 5 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = \underline{\quad}$
$-20 \div 5 = \underline{\quad}$	$\underline{\quad} \div \underline{\quad} = \underline{\quad}$
$-20 \div -4 = \underline{\quad}$	$\underline{\quad} \div \underline{\quad} = \underline{\quad}$

## Silver:

Match the worded question to the calculation and work out the answer:

Alice has £250 in her bank account. She pays £271 to have her car repaired. How much overdrawn is she?	$-271 - - 250 =$
Beth is £271 overdrawn, she pays £250 into her bank account. What is her balance?	$-271 + - 250 =$
Charlie owes a debt of £271. His sister offers to take £250 of this debt from him	$-271 + 250 =$
Danny is overdrawn by £271, and increases this debt by £250. How much money does he now owe?	$250 - 271 =$

## Bronze:



1. The temperature increases for  $-5^{\circ}\text{C}$  to  $7^{\circ}\text{C}$ . How much has the temperature increased by?
2. At midday the temperature is  $12^{\circ}\text{C}$ , by midnight it has fallen by  $17^{\circ}\text{C}$ . What is the temperature at midnight?
3. At 8pm it is  $-4^{\circ}\text{C}$  outside, by 2am it is  $-7^{\circ}\text{C}$ . Fred says that is 3 degrees warmer at 2am. Is he correct?

