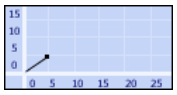
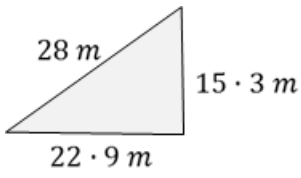
| Name: | Date: |
|---|---|
| Question 1:<br><br>Factorise the following expression;<br><br>$x^2 - x - 12$ | E+F 1·2b Silver Outcome 3 |
| Question 2:<br><br>  <br><br>A \$4000 investment is expected to return a profit of 7·9% p.a.<br><br>How much is the investment expected to be worth after 3 years? | APP 1·3a Silver Outcome 2 |
| Question 3:<br><br>Express the following as a single fraction in it's simplest form.<br><br>$\frac{5}{(x+3)} + \frac{3}{(x+7)}$ | E+F 1·3 Gold Outcome 2 |
| Question 4:<br><br>Find the equation of the line joining the points (2, 4) and (4, 8).<br><br>Give the equation in it's simplest form. | REL 1·1a Silver Outcome 2 |
| Question 5:<br><br>Use the converse of Pythagoras to determine whether or not the following triangle is right-angled.<br><br>  <br> | E+F 1·4a Bronze Outcome 1 |
| My score: | |

# Exam Questions

## Question 1:

E+F 1·2a Gold Outcome 3

Multiply out the brackets and collect like terms.

$(3x - 5)(x^2 + 2x - 6)$ **3**

## Question 2:

APP 1·3b Gold Outcome 1

Evaluate $6\frac{1}{5} - 2\frac{1}{3}$. 2

## Question 3:

REL 1·1d Gold Outcome 1

Seats on flights from London to Edinburgh are sold at two prices, £30 and £50.

On one flight a total of 130 seats was sold.

Let $x$ be the number of seats sold at £30 and $y$ be the number of seats sold at £50.

(*a*) Write down an equation in $x$ and $y$ which satisfies the above condition. **1**

The sale of the seats on this flight totalled £6000.

(*b*) Write down a second equation in $x$ and $y$ which satisfies this condition. **1**

(*c*) How many seats were sold at each price? **4**

## Question 4:

E+F 1·4b Silver Outcome 1

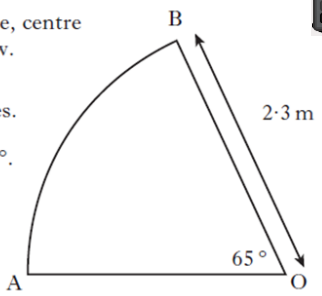
A sector of a circle, centre O, is shown below.

The radius of the circle is 2·3 metres.

Angle AOB is 65°.

Find the length of the arc AB.

**3**




## Question 5:

REL 1·3a Gold Outcome 3

Solve the equation $2x^2 + 7x - 3 = 0$, giving the roots correct to one decimal place. **4**

## My score: