

Reigate Grammar School



13+ Entrance Examination

NOVEMBER 2004

MATHEMATICS CALCULATOR PAPER

Time allowed: 45 minutes

NAME.....

- Work through the paper carefully
- Do not spend too much time on any single question
- Show any working in the spaces provided
- Use the blank left hand pages for rough work
- Remember to show all of your working, even if you are using your calculator

Solve these equations

1. $5(2x+1) - 3(2x-1) = 5$

Do not
write
in this
box

Answer =

3

2. $\frac{4}{3y} + \frac{1}{2y} = 3$

Answer =

3

3. $\frac{9}{(x+1)} = 4$

Answer =

3

Solve these equations

1. $\frac{3x}{4} + \frac{4x+5}{3} = 10$

Answer =

3

2. $\frac{3x}{2} = 5x - 7$

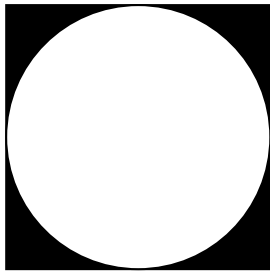
Answer =

2

3. $\frac{100}{x} = 20$

Answer =

1



A square is drawn around a circle of radius 10cm as shown. The area inside the square but outside the circle has been shaded. What percentage of the square has been shaded?

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Answer.....

4

Given that $a = \sqrt{b^2 - c^2}$ find the values of

(i) a when, $b = 5$ and $c = -3$

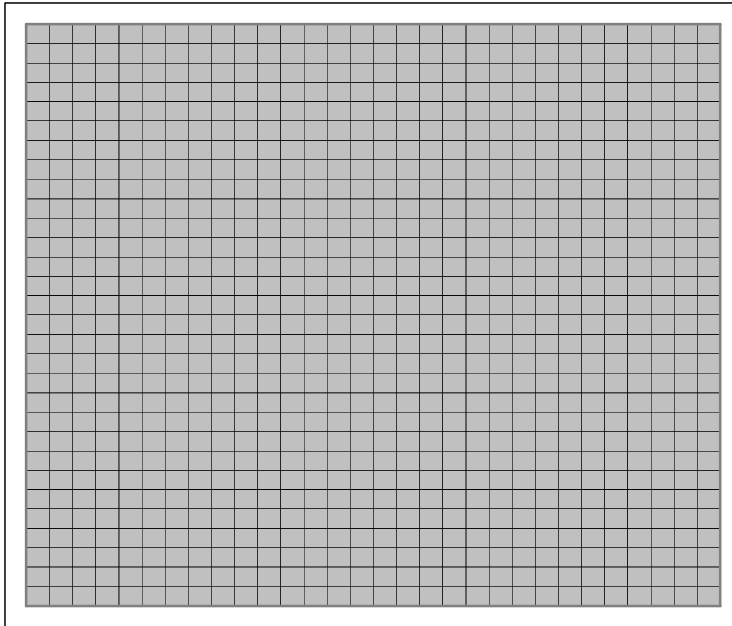
Answer.....

2

(ii) b when, $a = 4$ and $c = 2$

Answer.....

2



Do not
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box

Complete the table of values for the graph of $y = \frac{x^2}{10}$

x	-10	-8	-6	-4	-2	0	2	4	6	8	10
y	10			1.6		0			3.6		10

3

Plot the points and draw the graph of $y = \frac{x^2}{10}$ on your axes

2

On the same axes draw the graph of $y = \frac{1}{2}x + 5$

3

Write down the coordinates of the points of intersection of your two graphs.

4

Answers...(.....) (.....)

**END OF EXAMINATION
CHECK YOUR WORK, IF YOU HAVE TIME**

	2
<p>A bag contains 10 red , 4 blue and 6 yellow balls. I select a ball from the bag.</p> <p>(a) What is the probability that my ball is not red?</p> <p>(b) What is the probability that my ball is blue?</p> <p>I do not replace my ball. I now select a second ball.</p> <p>(c) If my first ball was blue what is the probability that my second ball is blue?</p> <p>(d) What is the probability that I have two balls of the same colour?</p>	<p>1</p> <p>1</p> <p>1</p> <p>3</p>
	5