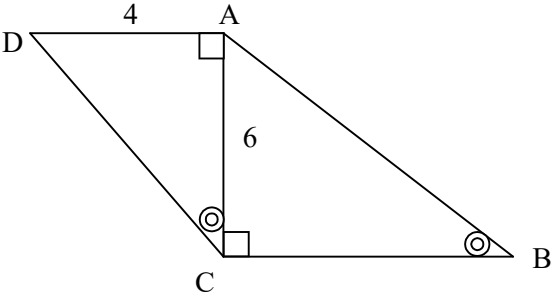


1.	12½% of 2 ⁸ is									
	a.	25 ⁸	b.	2 ⁵	c.	2 ¹¹	d.	2 ⁴	e.	2

2.	What is the value of $225 \times \frac{225 + 15^2}{15^2}$?									
	a.	50625	b.	50650	c.	450	d.	225	e.	2

3.	A box contains 175 cards that are numbered 1 through 175. If a card is drawn at random, what is the probability that it has a number that is divisible by 5?									
	a.	5%	b.	$\frac{5}{34}$	c.	$\frac{7}{20}$	d.	$\frac{1}{5}$	e.	2%

4.	The sizes of the angles of a triangle are in the ratio 2:3:4. The size of the largest angle, in degrees is									
	a.	40	b.	80	c.	45	d.	90	e.	72

5.	In the figure below, AC is perpendicular to AD and CB, measures of angles ABC and DCA are equal, and the measures of the sides are given in the diagram. Find the length of AB. 									
	a.	78	b.	$3\sqrt{13}$	c.	$2\sqrt{3}$	d.	$3\sqrt{10}$	e.	52

6.	The repeating decimal $0.\overline{3}$ multiplied by itself is equal to									
	a.	$0.\overline{09}$	b.	$0.0\overline{9}$	c.	$0.\overline{1}$	d.	$0.\overline{9}$	e.	0.9

7.	Each of the letters A , B , C , and D represent a different integer in the set $\{1, 2, 3, 4\}$ but not necessarily in that order. If $\frac{A}{B} - \frac{C}{D} = 1$, then what is $A + B$?									
	a.	3	b.	4	c.	5	d.	6	e.	7

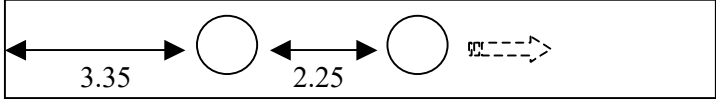
8.	For $x > 6$, which of the following fractions is the smallest?									
	a.	$\frac{6}{x}$	b.	$\frac{6}{x+1}$	c.	$\frac{6}{x-1}$	d.	$\frac{x}{6}$	e.	$\frac{x+1}{6}$

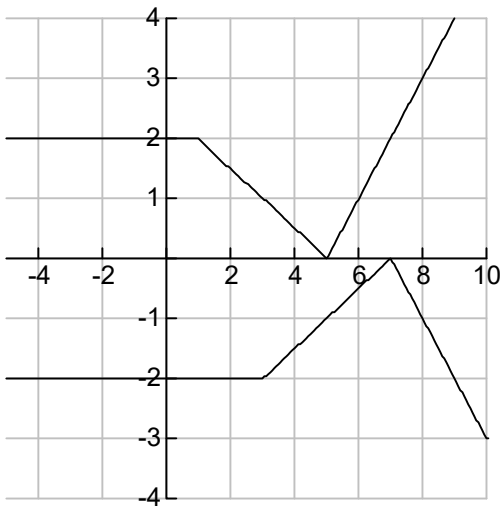
9.	What is the maximum number of points of intersection of six different lines drawn in the plane?									
	a.	10	b.	12	c.	15	d.	18	e.	24

10.	A circle and one inscribed square of side m and one circumscribed square of side N are given. What is the ratio of m to N?									
	a.	$\sqrt{2} : 2$	b.	1:2	c.	1:4	d.	$\sqrt{2} : 4$	e.	$\sqrt{3} : 2$

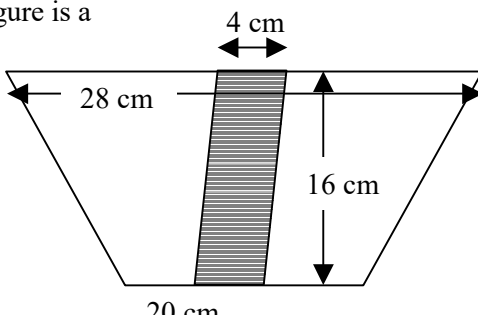
11.	$1 - 2 + 3 - 4 + 5 - 6 + \dots - 98 + 99 =$									
	a.	-50	b.	-49	c.	0	d.	49	e.	50

12.	What is the sum of the digits in the decimal form of the product $2^{1999} \times 5^{2001}$?									
	a.	1	b.	2	c.	5	d.	7	e.	25

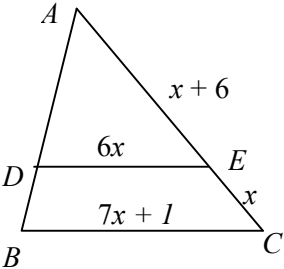
13.	Four holes are to be drilled along the center line of a strip of metal so that they are 2.25 cm apart. The end holes are to be 3.35 cm from their corresponding ends. What length must the strip of the metal be, if the radius of each hole is 1 cm? 									
	a.	17.45	b.	19.20	c.	19.70	d.	21.45	e.	23.70

14.	 The graph above the x-axis is that of the function $f(x)$. Which function does the graph below the x-axis represent?									
	a.	$-f(x)$	b.	$f(-x)$	c.	$-f(x - 2)$	d.	$f(x) - 2$	e.	$1 - f(x - 2)$

15.	The average mark on a test for six students was calculated to be 84. One student's mark had been mistakenly entered as 86 rather than the correct mark of 68. The correct average mark for these six students is									
	a.	87	b.	83	c.	82	d.	81	e.	78

16.	Find the area of the non-shaded region. The figure is a trapezium with a shaded parallelogram inside.									
										
	a.	320	b.	336	c.	640	d.	672	e.	704

17.	Solve the following inequality over the set of real numbers $ 2x-3 > -3$									
	a.	$\mathbb{R}$	b.	$x > 0$	c.	$x \geq 0$	d.	$0 < x < 3$	e.	$0 \leq x \leq 3$

18.	If BC is parallel to DE. Find x , the length of segment EC .									
										
a.	$\{-3/5, 2\}$	b.	$\frac{-43 + \sqrt{1825}}{2}$	c.	35	d.	3	e.	2	

19.	The positive integers are added in consecutive groups of 5 each. The first sum is $1 + 2 + 3 + 4 + 5 = 15$; the second sum is $6 + 7 + \dots$, and so on. The group that has a sum nearest to 150 is the									
	a.	5th	b.	6th	c.	7th	d.	28th	e.	29th

20.	The least natural number that leaves a remainder of 1 when divided by 3, a remainder of 4 when divided by 5, and a remainder 1 when divided by 11, lies between (excluding end points)									
	a.	20 & 30	b.	30 & 40	c.	40 & 50	d.	50 & 60	e.	60 & 70