1 The standard cost of shipping a single box was $16.40.

If a company made a shipment of 10 000 boxes, how much did the company spend on the shipping fee?

A $164 000 000

B $16 400 000

C $1 640 000

D $164 000

E $16 400

2 Last week, a factory produced a total of 326 boxes of crayons.

If each box contained 36 crayons, how many crayons did the factory produce last week?

A 12 216 crayons

B 11 736 crayons

C 11 546 crayons

D 10 864 crayons

E 10 646 crayons

3   The table below shows the heights of five students.

STUDENT	HEIGHT
Anna	158.436 centimetres
Carol	158.444 centimetres
Edna	158.46 centimetres
Marylou	158.485 centimetres
Tricia	158.47 centimetres

If Emma is 158.475 centimetres tall, who among these students is taller than Emma?

A Marylou only

B Tricia only

C Edna only

D Marylou and Tricia only

E Edna and Tricia only

4   Last month, the local post office sold a total of 178 rolls of stamps.

If there are 120 stamps in each roll, how many stamps did the local post office sell last month?

A 20 360 stamps

B 20 740 stamps

C 21 360 stamps

D 21 540 stamps

E 21 730 stamps

5 Yesterday, Arthur played a video game and scored a total of 512 points.

If he wanted to beat the score he got yesterday, at least how many stages would he need to play if he scored exactly 25 points in each stage?

A 17 stages

B 18 stages

C 19 stages

D 20 stages

E 21 stages

6 Heidi planted a lemon tree in her front yard.

After two weeks, the lemon tree had grown 48.72 centimetres.

If the lemon tree had grown 23.28 centimetres in the second week alone, how much did the lemon tree grow in the first week alone?

A 24.54 centimetres

B 25.44 centimetres

C 25.54 centimetres

D 26.24 centimetres

E 26.34 centimetres

7 A carpenter connected two pieces of wood.

The two pieces of wood had a combined length of $7\frac{1}{4}$ metres.

If one of the two pieces was $3\frac{7}{8}$ metres long, how long was the other piece?

A $3\frac{3}{8}$ metres

B $3\frac{3}{4}$ metres

C $4\frac{1}{8}$ metres

D $4\frac{3}{8}$ metres

E $4\frac{3}{4}$ metres

8 Amy needs to compare the product of 3 × (12 864 − 8 455) and the difference of 12 864 − 8 455 without making any calculations.

Which of the following statements is true?

A 3 × (12 864 − 8 455) is one-third as large as 12 864 − 8 455.

B 3 × (12 864 − 8 455) is equal to 12 864 − 8 455.

C 3 × (12 864 − 8 455) is two times as large as 12 864 − 8 455.

D 3 × (12 864 − 8 455) is three times as large as 12 864 − 8 455.

E No comparison can be made unless Amy made any calculations.

9 The chef had three bottles of mustard.

Each bottle contained 250 millilitres of mustard.

If the chef evenly distributed the mustard in the three bottles into 12 containers, how much did the chef put in one container?

A $62\frac{1}{12}$ millilitres

B $62\frac{1}{6}$ millilitres

C $62\frac{1}{2}$ millilitres

D $62\frac{2}{3}$ millilitres

E $62\frac{3}{4}$ millilitres

10 A rubber band can be stretched up to $4\frac{1}{2}$ times its original length.

If the original length of the rubber band is $8\frac{3}{4}$ centimetres, up to how long can the rubber band be stretched?

A $32\frac{3}{8}$ centimetres

B $32\frac{2}{3}$ centimetres

C $34\frac{3}{8}$ centimetres

D $34\frac{3}{4}$ centimetres

E $39\frac{3}{8}$ centimetres

11 Which of the following statements is always true?
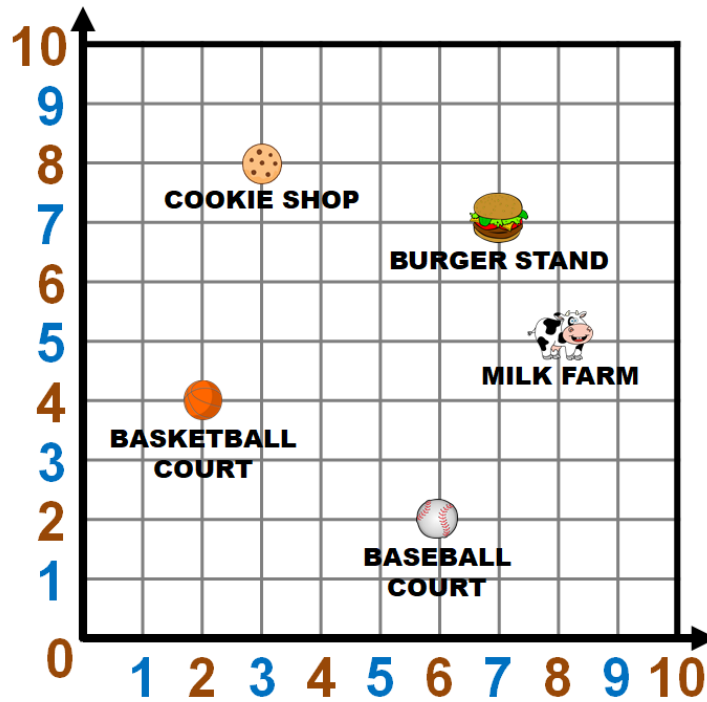
    A All squares are rectangles.

    B All parallelograms are rectangles.

    C All rectangles are squares.

    D All rhombuses are squares.

    E All rhombuses are rectangles.

12 A rectangular solid brick is 12 centimetres long and 4 centimetres wide.

If the brick has a volume of 288 cubic centimetres, how tall is the brick?

    A 3 centimetres

    B 4 centimetres

    C 6 centimetres

    D 8 centimetres

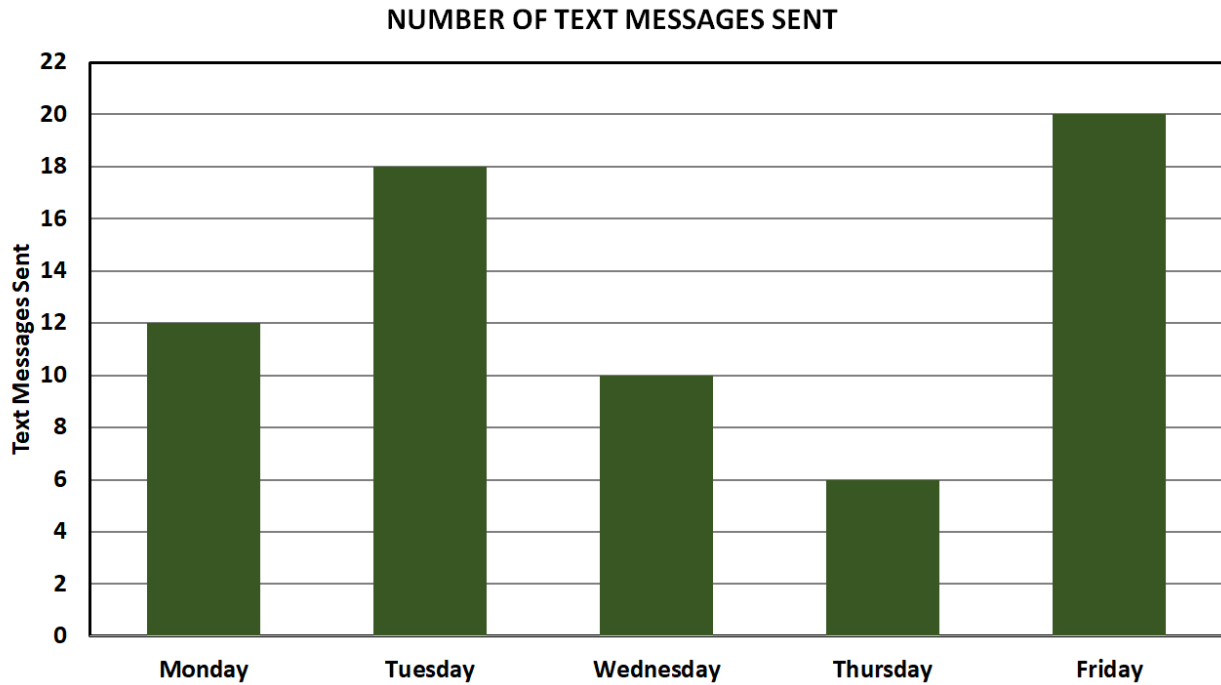   **E** 12 centimetres

13 The coordinate plane below shows the locations of some of the places in the town of Gold Coast.

What are the coordinates that give the location of the cookie shop?

A (3, 3)

B (3, 5)

C (3, 8)

D (8, 3)

E (8, 8)

14 The bar graph below shows the number of text messages Sonya sent for each day of the week last week.

NUMBER OF TEXT MESSAGES SENT

If Sonia sent half as many text messages on Saturday as on Friday and twice as many text messages on Sunday as on Thursday, how many text messages did Sonia send on Saturday and Sunday?

A 52 text messages

B 26 text messages

C 22 text messages

D 12 text messages

E 10 text messages

15 The analogue clocks below show the start and end times of Ruben's soccer practice.

START TIME   END TIME

How long did Ruben's soccer practice last?

A 1 hour 45 minutes

B 1 hour 55 minutes

C 2 hours 5 minutes

D 2 hours 25 minutes

E 2 hours 55 minutes

16 The maker of birdhouses wants to earn a profit of $80 when he sells 400 birdhouses.

It costs 50 cents each to make the first 100 birdhouses and 40 cents each to make each birdhouse after the first 100.

At what price should the maker of birdhouses sell the 400 birdhouses? (Profit = Revenue – Expenses)

A $270

B $250

C $200

D $220

E $350

17 Permanent markers cost 30 cents each and whiteboard markers cost 20 cents each.

If Sally had $2.50 to spend on markers, what is the greatest number of markers that she can buy?

A 9 markers

B 10 markers

C 11 markers

D 12 markers

E 13 markers

18 Mr. Romero bought a sports car at a discounted price of $1 050.

If the discounted price of the sports car was 30 percent less than the original price of the car, what was the original price of the sports car?

A $750

B $1 200

C $1 350

D $1 500

E $1 950

19 The three solid coloured balls below have different masses.

The average (arithmetic mean) mass of the blue ball and the purple ball is 38 kilograms.

The average mass of the purple ball and the green ball is 48 kilograms.

The average mass of the blue ball and the green ball is 58 kilograms.

What is the average mass of the three balls?

A 40 kilograms

B 42 kilograms

C 44 kilograms

D 48 kilograms

E 50 kilograms

20 A certain factory makes inverter and non-inverter air-cons.

Last October, the factory made twice as many inverter aircons as non-inverter air-cons.

Last November, the factory made twice the number of inverter aircons that it did in October and three times the number of non-inverter aircons that it did in October.

If the factory made a total of 500 air-cons for those 2 months, how many inverter air-cons did the factory make in October?

A 50 inverter aircons

B 100 inverter aircons

C 60 inverter aircons

D 80 inverter aircons

E 90 inverter aircons

21 A box contains 20 metal balls, each either an iron ball or a copper ball.

The iron balls have a mass of 25 grams each and the copper balls have a mass of 10 grams each.

If the total mass of the balls in the box is 305 grams, how many iron balls are in the box?

A 5 iron balls

B 7 iron balls

C 11 iron balls

D 13 iron balls

E 17 iron balls

22 The number of coconut trees on Aunt Margaret's farm is half the number of coconut trees on Uncle Ben's farm.

The land area of Aunt Margaret's farm is 14 times the land area of Uncle Ben's farm.

The number of coconut trees per unit of land area on Aunt Margaret's farm is how many times the number of coconut trees per unit of land area on Uncle Ben's farm?

A $\frac{1}{28}$

B $\frac{1}{14}$

C $\frac{1}{7}$

D $\frac{1}{4}$

E $\frac{1}{2}$

23 The Anderson family and the Robinson family both went to the theme park last weekend.

The Anderson family bought 1 adult ticket and 3 children tickets for $64.50.

The Robinson family bought 1 adult ticket and 6 children tickets for $109.50.

What is the cost of one children's ticket?

A $4.50

B $8.50

C $12.00

D $15.00

E $19.50

24 Bert's age is seven more than three times Ernie's age.

Which of the following could be Bert's age?
   I.   16 years old
   II.   18 years old
   III. 22 years old

A I only

B II only

C III only

D I and III only

E I, II, and III

25 The machine at the factory runs for 8 hours each day on Mondays, Tuesdays, and Thursdays, runs for 6 hours each day on Wednesdays and Fridays, and does not run on Saturdays and Sundays.

Last week, the machine produced a total of 324 motherboards.

If the machine produced the same number of motherboards per hour, how many motherboards did it produce per hour last week?

A 11 motherboards

B 10 motherboards

C 9 motherboards

D 8 motherboards

E 7 motherboards

26 During the school's bake sale, Fran sold $\frac{3}{4}$ of all the cupcakes she baked for 25 cents each.

If 150 cupcakes were left unsold, how much money did Fran make from the sale of cupcakes during the school's bake sale?

A $12.50

B $37.50

C $50.00

D $112.50

E $150.00

27 Cecile took a series of 12 tests last month.

She scored 90 on each of the four tests and 96 on each of the remaining tests.

What was Cecile's average (arithmetic mean) score per test in all 12 tests?

A 92

B 93

C 94

D 95

E 96

28 A bus driver earns a fixed amount per hour for the first 40 hours he works and $30 for each hour he works after the first 40 hours.

Last week, the bus driver worked for 48 hours and earned $920.

How much does the bus driver earn per hour for the first 40 hours he works?

A $15

B $16

C $17

D $18

E $19

29 A plumber earned an average (arithmetic mean) of $200 per day over the past 10 working days.

If the plumber earned $180 per day for the first six of the past 10 working days, what was the plumber's average earning per day for the last four of the past 10 working days?

A $210

B $220

C $225

D $230

E $240

30 The total revenue from TV ads the television station made this year was $7.68 million.

Last year, the total revenue from TV ads of the television station was $6.4 million.

By what percentage did the total revenue from TV ads increase this year compared to last year?

A 5 percent

B 15 percent

C 17 percent

D 20 percent

E 80 percent

31 A rectangular garden has a perimeter of 80 metres.

If the length of the garden is 8 metres longer than its width, what is the area of the garden?

A 384 square metres

B 640 square metres

C 452 square metres

D 580 square metres

E 230 square metres

32 Amy is half as old as Rupert and three times older than Jane.

If the sum of their ages equals 100, how old is Amy?

A 30 years old

B 25 years old

C 55 years old

D 14 years old

E 42 years old

33 Karen and David have different telephone plans.

Karen's telephone plan has a one-time sign-up fee of $70 and costs $18 per month, including the first month.

David's telephone plan has a one-time sign-up fee of $40 and costs $20 per month, including the first month.

After how many months will Karen and David have paid the same total amount to their respective telephone plans?

A 18 months

B 17 months

C 16 months

D 15 months

E 14 months

34 A treasure chest contains 278 coins, each either gold or silver coin.

If 8 gold coins are removed from the treasure chest, then the number of gold coins in the treasure chest will be twice the number of silver coins.

How many silver coins are in the treasure chest?

A 80 silver coins

B 90 silver coins

C 100 silver coins

D 110 silver coins

E 200 silver coins

35 A certain printer can print 12 coloured pictures per minute or 25 black and white pictures per minute.

If the printer printed 1 200 coloured pictures and 1 200 black and white pictures, how many more minutes did it spend printing the coloured pictures than the black and white pictures?

A 12 minutes

B 28 minutes

C 34 minutes

D 45 minutes

E 52 minutes