

Assessment Test for Singapore Primary Mathematics 5B Standards Edition

This test covers material taught in Primary Mathematics 5B Standards Edition
(<http://www.singaporemath.com/>)

| | | |
|-----|---|---|
| 1. | Consider the number 12.406 | |
| (a) | What is the value of the digit in the tenths place? _____ | [1] |
| (b) | What digit is in the hundredths place? _____ | [1] |
| (d) | What is difference between this number and 12.4? _____ | [1] |
| 2. | Write $>$, $<$, or $=$ in each \bigcirc | |
| (a) | $0.205 \bigcirc \frac{25}{1000}$ | (b) $4.10 \bigcirc 4.1$ [2] |
| (c) | $3.1 - 0.46 \bigcirc 2 + 0.06$ | (d) $0.89 \times 7 \bigcirc 7$ [2] |
| (e) | $17.4 \div 5 \bigcirc \frac{3}{10}$ | (f) $3 - 0.02 \bigcirc 2\frac{8}{9}$ [2] |
| 3. | Multiply or divide. Use mental calculation. | |
| (a) | $0.4 \times 100 =$ _____ | (b) $0.008 \times 1000 =$ _____ [2] |
| (c) | $56.8 \div 100 =$ _____ | (d) $0.007 \div 0.01 =$ _____ [2] |
| (e) | $400 \times 0.8 =$ _____ | (f) $120 \div 0.02 =$ _____ [2] |
| 4. | Find the equivalent measures. | |
| (a) | $0.04 \text{ m} =$ _____ cm | (b) $6.25 \text{ lb} =$ _____ lb _____ oz [2] |
| (c) | $35 \text{ ml} =$ _____ liters | (d) $0.75 \text{ ft} =$ _____ in. [2] |

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5. Multiply or divide. Give an estimate first.

(a) 17.02×43

(b) 8.1×2.19

[4]

Estimate: _____

Estimate: _____

Answer: _____

Answer: _____

(c) $11.25 \div 18$

(d) $89.96 \div 0.04$

[4]

Estimate: _____

Estimate: _____

Answer: _____

Answer: _____

6. Find the following correct to 2 decimal places

(a) $49.95 \div 0.07$

(b) $89.5 \div 31$

[4]

7. The total cost of 4 lb of fish and 3 lb of meat is \$42.40. If 1 lb of fish costs \$3.25 more than 1 lb of meat, what is the cost of 1 lb of meat? [3]

8. The length of one side of a cube is 1 yd. What is its volume in cubic feet? [1]

9. The area of one side of a rectangular prism is 72 cm^2 , and its volume is 360 cm^3 . What is the length of the unknown edge?

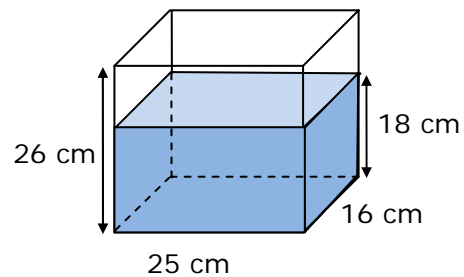
$AB =$

Area = 72 cm^2



Volume = 360 cm^3

10. A rectangular tank measuring 25 cm by 16 cm by 26 cm is to be filled with water to a depth of 18 cm. How much more water is needed to fill the tank? Give your answer in liters.
(1 liter = 1000 cm^3)



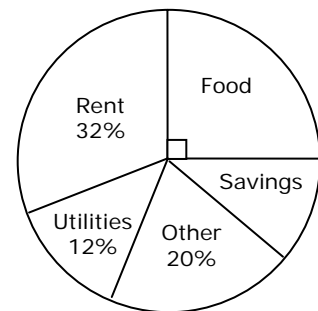
| | | |
|-----|--|-----------------|
| 11. | How many 4-cm cubes can fit into a rectangular box 1 m long, 0.4 m wide, and 0.6 m high? | [2] |
| 12. | Express each as a percentage. | |
| (a) | 0.47 | [1] |
| (b) | $\frac{6}{15}$ | [1] |
| (c) | 215 out of 500 | [1] |
| 13. | Express as a decimal and as a fraction in its simplest form. | |
| 85% | Decimal: _____ | Fraction: _____ |
| [2] | | |
| 14. | John had \$75. He spent \$15 on a book. What percentage of his money does he have left? | [3] |

15. The normal price of a camera was \$76. At a sale it was sold at a discount of 15%. [3]
What was the selling price of the camera?

16. Alice has 50% of the amount of money Betty has, and Carrie has $\frac{2}{5}$ of the [3]
amount of money Alice has. If Betty has \$364 more than Carrie, how much
money does Alice have?

17. This pie chart represents the use of monthly income. [1]

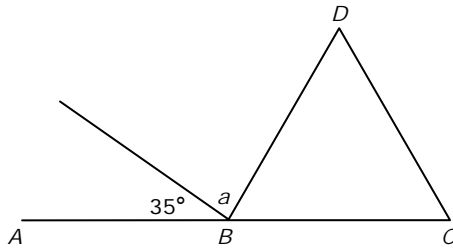
(a) What percentage of the monthly income is saved?



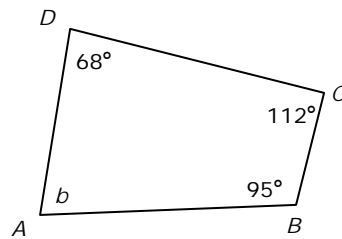
(b) If \$264 is saved, how much is the monthly income? [2]

18. The following figures are not drawn to scale. Find the unknown marked angle in each.

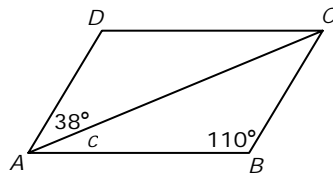
(a) ABC is a straight line. BCD is an equilateral triangle. [2]



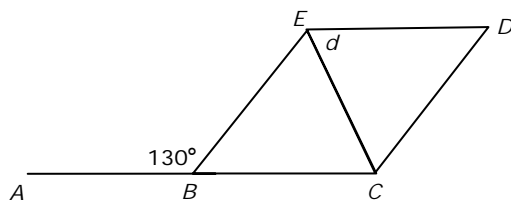
(b) ABCD is a quadrilateral. [2]



(c) ABCD is a parallelogram. [2]



(d) ABC is a straight line. BCDE is a rhombus. [2]



19. The table below shows the high and low temperature in degrees Fahrenheit for one week at site A.

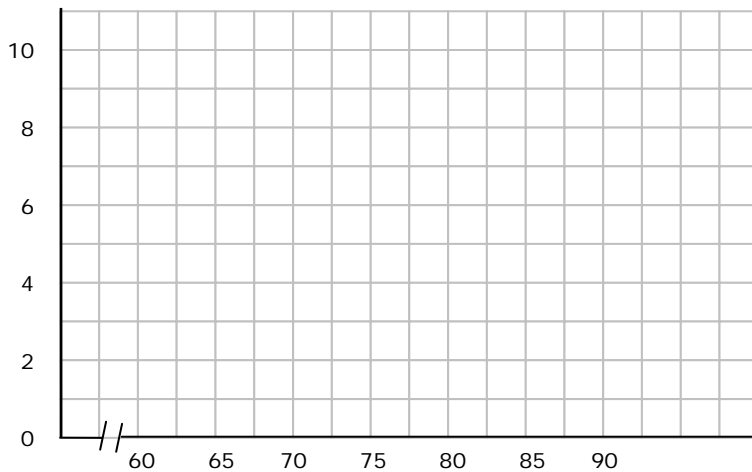
| | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
|------|-------|-------|-------|-------|-------|-------|-------|
| High | 72° | 75° | 67° | 68° | 71° | 75° | 75° |
| Low | 51° | | 47° | 49° | 52° | 52° | 55° |

- (a) What is the median high temperature? _____ [1]
- (b) What is the mode for the high temperature? _____ [1]
- (c) What is the mean high temperature for the first 4 days only? _____ [1]
- (d) The average low temperature for the first four days only was 50° F. What was the low temperature on the second day? _____ [1]

The weekly average high temperatures at different sites in the state were recorded. The results are shown in this table.

| Average temperature °F | Number of sites |
|------------------------|-----------------|
| 65 to 69.99 | 6 |
| 70 to 74.99 | 10 |
| 75 to 79.99 | 5 |
| 80 to 84.99 | 2 |

- (e) Which range includes the results for site A? _____ [1]
- (f) Show these results for the weekly average high temperatures in different sites in a histogram. [2]



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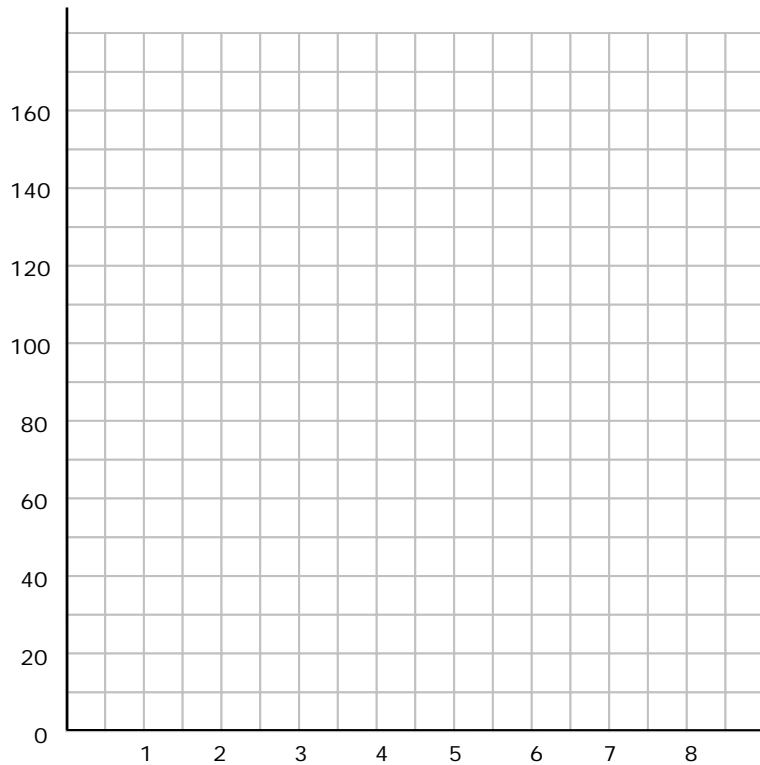
20. A tank has 20 gallons of water in it. A tap is turned on and more water is added to the tank. After 20 minutes, there will be 520 gallons of water in the tank.

(a) What is the rate at which the water is flowing from the tap? _____ [2]

(b) Complete this table for the amount of water in the tank. [2]

| | | | | | | |
|--------------|----|---|---|---|---|-----|
| Time (min) | 1 | 2 | 3 | 4 | 5 | t |
| Amount (gal) | 45 | | | | | |

(c) Plot these points in a line graph. [2]



(d) Use the graph to estimate to the nearest tenth of a minute how long it takes until there is 100 gallons in the tank _____ [1]

| | | | | |
|-----|--|---|-------------------|-----|
| 21. | Simplify the following: | (a) $20a + 14 - 8a - 7$ | (b) $b + 6b - 2b$ | [2] |
| 22. | Find the value of the expression $150 - 2n^2$ when n is 8. | | | [1] |
| 23. | Amy is x years old. Betty is 4 times as old as Amy. Carla is 3 years older than Betty. | | | |
| | (a) | Express Carla's age in years in terms of x . | | [2] |
| | (b) | If Amy is 2 years old, how old, in years, is Carla? | | [1] |
| 24. | Mrs. Wilson bought 4 bags of rice. She gave the cashier \$50 and received \$ y change. | | | |
| | (a) | Express the cost of one bag of rice in terms of y . | | [2] |
| | (b) | If $y = 18.60$, what is the cost of one bag of rice? | | [1] |

25. Solve:

(a) $(-3) + (-29)$

(b) $12 + (-7)$

[2]

(c) $(-15) + 6$

(d) $18 + (-32) + 7$

[2]

(e) $85 - 100$

(f) $-50 + 78 - 28$

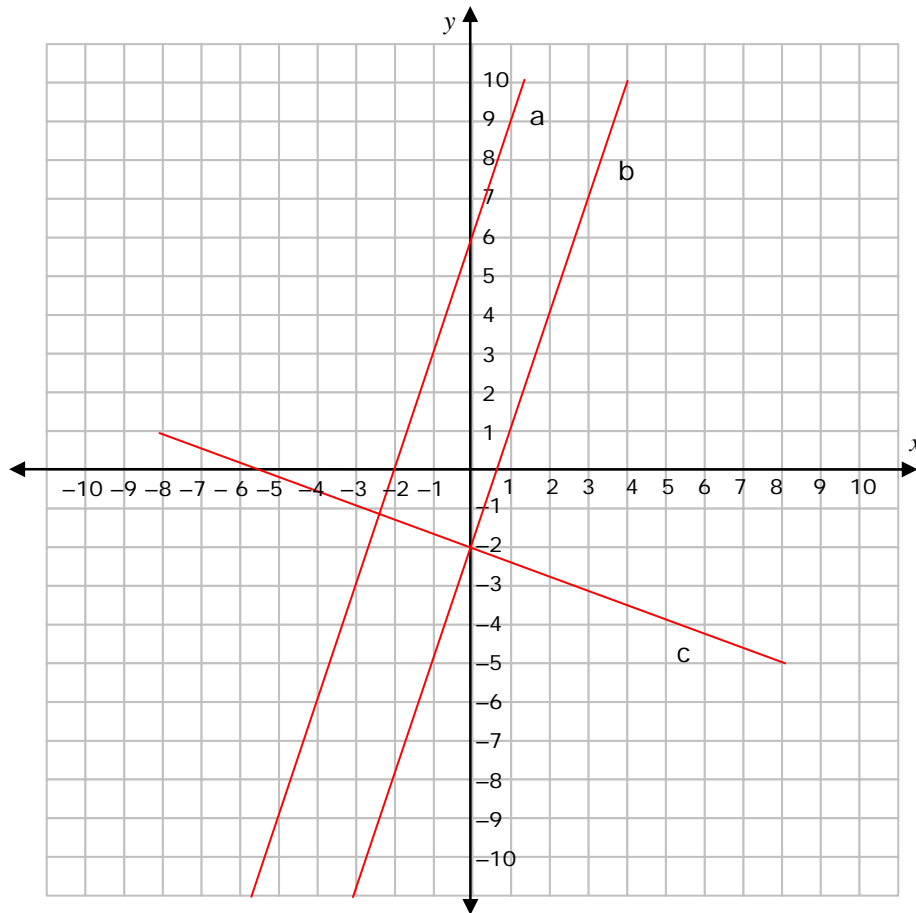
[2]

26. (a) In the equation $y = 3x + (-2)$, what is y if x is 6?

[1]

(b) Which line is the graph for $y = 3x + (-2)$?

[2]



(c) Use the graph to find the value of y for $x = -2$.

[2]

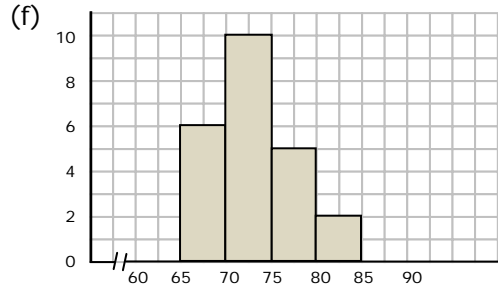
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Answer Key

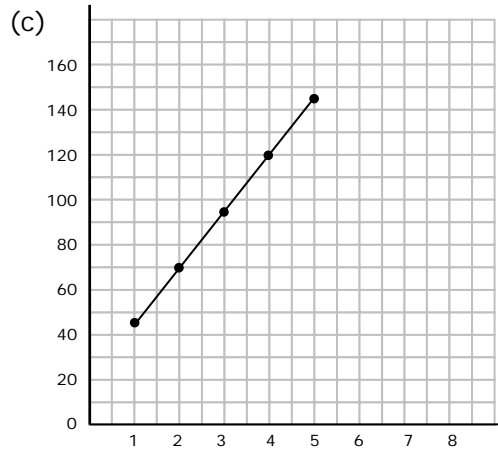
1. (a) 0.4 (b) 0
(c) 0.06
2. (a) > (b) =
(c) > (d) <
(e) > (f) <
3. (a) 40 (b) 8
(c) 0.568 (d) 0.7
(e) 320 (f) 6000
4. (a) 4 cm
(b) 6 lb 4 oz
(c) 0.035 liters
(d) 9 in.
5. (a) 800; 731.86
(b) 16; 17.739
(c) 0.5; 0.625
(d) 2000; 2249
6. (a) 713.57 (b) 2.89
7. \$4.20
8. 27 ft³
9. 5 cm
10. 3.2 liters
11. 3750
12. (a) 47% (b) 40%
(c) 43%
13. 0.85; $\frac{17}{20}$
14. 80%
15. \$64.60
16. \$227.50
17. (a) 11% (b) \$2400
18. (a) 85° (c) 85°
(b) 32° (d) 65°

19. (a) 72° (b) 75°
(c) 70.5° (d) 53°
(e) 70 to 74.99



20. (a) 25 gal/min
(b)

| Time (min) | 1 | 2 | 3 | 4 | 5 | t |
|--------------|----|----|----|-----|-----|------------|
| Amount (gal) | 45 | 70 | 95 | 120 | 145 | $25t + 20$ |



- (d) 3.2 (accept 3.1, 3.2, 3.3, or 3.4)

21. (a) $12a + 7$ (b) $5b$
22. 22
23. (a) $(4x + 3)$ years
(b) 11 years
24. (a) $\$ \left(\frac{50 - y}{4} \right)$ (b) \$7.85
25. (a) -32 (b) 5
(c) -9 (d) -7
(e) -15 (f) 0
26. (a) 16 (b) b
(c) -8

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