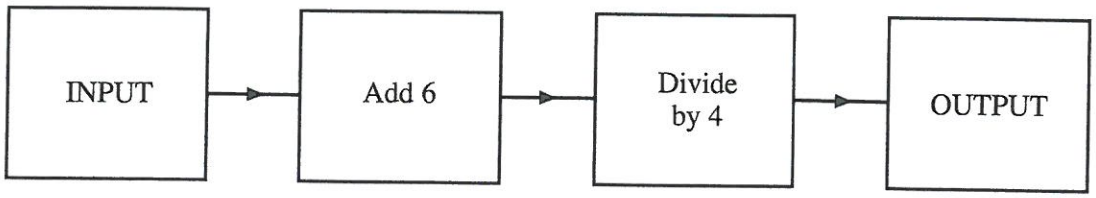
Number Machines & Context Formulas PPQ's

(1)

(a) The diagram below represents a number machine.



(i) When the INPUT is 14, what is the OUTPUT?

.....

(ii) When the OUTPUT is 7, what is the INPUT?

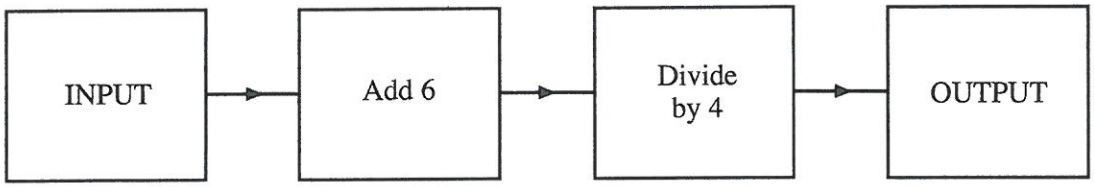
.....

.....

[3]

(2)

(a) The diagram below represents a number machine.



(i) When the INPUT is 14, what is the OUTPUT?

.....

(ii) When the OUTPUT is 7, what is the INPUT?

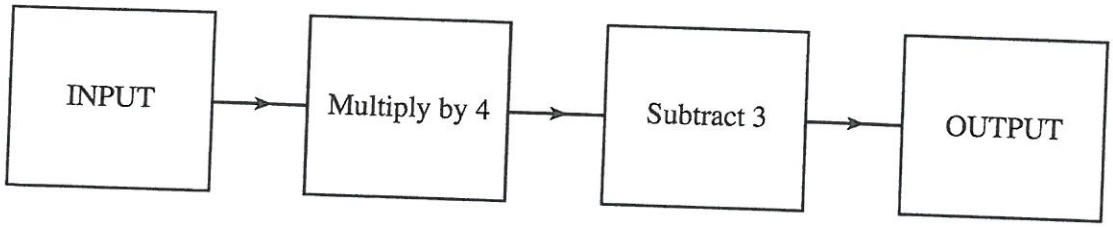
.....

.....

[3]

3

(a) The diagram below represents a number machine.



(i) When the INPUT is 8, what is the OUTPUT?

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(ii) When the OUTPUT is 17, what is the INPUT?

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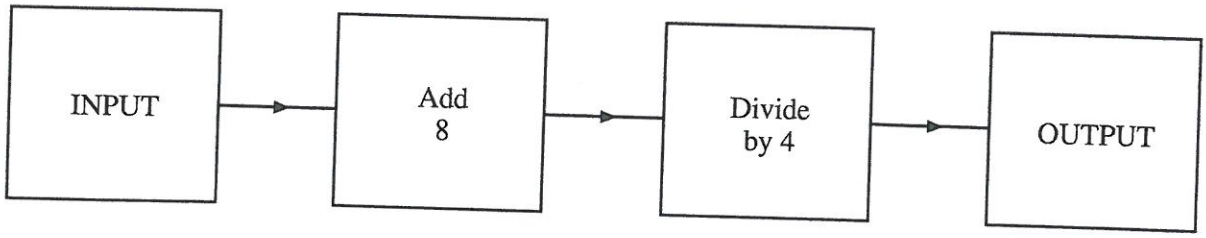
[3]

4

(a)



(i) Find the value of the OUTPUT when the INPUT is 12.

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[1]

(ii) Find the value of the INPUT when the OUTPUT is 10.

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[2]

only

5. *(a)* Janet thinks of a number.
She divides her number by 6 and adds 10.
The answer she gets is 14.
What number did Janet think of?

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[2]

(6) A person's weekly wage is worked out using the formula

Wage = Number of hours of overtime × £15 + Basic pay

(a) Find a person's **Wage** when the **Number of hours of overtime** is 7 and the **Basic pay** is £150.

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[2]

(b) Find the **Number of hours of overtime**, when the **Wage** is £270 and the **Basic pay** is £180.

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[2]

0185 080005

(7) The formula for the cost of buying a television on credit is

Cost of buying a television = 36 × Monthly payment + Deposit

0185 080007

(a) Find the **Cost of buying a television** when the **Monthly payment** is £40 and the **Deposit** is £30.

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[2]

(b) Find the **Deposit**, when the **Cost of buying a television** is £1330 and the **Monthly payment** is £35.

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[2]

8

The formula for the cost of getting a person to do repairs is

Cost = Number of hours × £25 + Call Out Charge

(a) Find the **Cost** when the **Number of hours** is 5 and the **Call Out Charge** is £50.

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[2]

(b) Find the **Call Out Charge**, when the **Cost** is £240 and the **Number of hours** is 8.

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[2]

9

The formula for the cost of printing books is

Printing Cost = Number of books × Cost per book + £2000

(a) Find the **Printing Cost** when the **Number of books** is 300 and the **Cost per book** is £9.

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[2]

(b) Find the **Cost per book** when the **Printing Cost** is £5000 and the **Number of books** is 600.

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[2]

10

The formula for the cost of hiring a hedge trimmer is

Cost = Number of days × £21 + Hiring Fee

(a) Find the **Cost** when the **Number of days** is 4 and the **Hiring Fee** is £15.

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[2]

(b) Find the **Hiring Fee**, when the **Cost** is £230 and the **Number of days** is 10.

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[2]

11

The formula for the cost of buying a computer on credit is

cost = monthly payment x 20 + deposit

(a) Find the **cost** of a computer, when the **monthly payment** is £18 and the **deposit** is £50.

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[2]

(b) The **cost** of another computer is £520.
Find the **monthly payment** when the **deposit** is £60.

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[2]